AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT

1. CONTRACT ID CODE	PAGE	OF	PAGES
	1		2

2. AMENDMENT/MODIFICATION NO.	3. EFFECTIVE DATE	4. REQUISITION/PURCHASE REQ. NO.	5. PROJECT NO. *(If applicable)*
0007	4 Oct 2002		

6. ISSUED BY	CODE	7. ADMINISTERED BY *(If other than Item 6)*	CODE
US ARMY ENGINEER DISTRICT, FORT WORTH ATTN: CESWF-CT (RM 2A19) PO BOX 17300 FORT WORTH, TX 76102-0300			

8. NAME AND ADDRESS OF CONTRACTOR *(No., street, county, State and ZIP Code)*	(X)	9A. AMENDMENT OF SOLICIATION NO.
	☒	DACA63-02-R-0017
		9B. DATED *(SEE ITEM 11)* 26 JUNE 2002
	☐	10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED *(SEE ITEM 11)*
CODE / FACILITY CODE		

11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a)By completing items 8 and 15, and returning _____ copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA *(If required)*

13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	
	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: *(Specify authority)* THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES *(such as changes in paying office, appropriation date, etc.)* SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER *(Specify type of modification and authority)*

E. IMPORTANT: Contractor ☐ is not, ☐ is required to sign this document and return _____ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (*Organized by UCF section headings, including solicitation/contract subject matter where feasible.)*

The Solicitation for IDIQ, DESIGN-BUILD REPLACE FAMILY HOUSING, DYESS AIR FORCE BASE, ABILENE, TEXAS, is amended as follows:

See Continuation Sheet (or Sheets)

NOTE: Proposal Receipt date is 16 October 2002, 4 p.m., as previously announced.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER *(Type or print)*		16A. NAME AND TITLE OF CONTRACTING OFFICER *(Type or print)*	
15B. CONTRACTOR/OFFEROR *(Signature of person authorized to sign)*	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	16C. DATE SIGNED

Item 14. Continued.

CHANGES TO PRICE PROPOSAL SCHEDULE

1. Replace the Price Proposal Schedule, with the accompanying new Price Proposal Schedule bearing the notation "ACCOMPANYING AMENDMENT NO. 0007 TO SOLICITATION NO. DACA63-02-R-0017."

CHANGES TO BIDDING REQUIREMENTS, PROJECT REQUIREMENTS, AND SPECIFICATIONS

2. Section 01000, Part 10, HOUSING UNIT STRUCTURAL DESIGN: Replace this Part 10 with the accompanying new Part 10 of the same number and title, bearing the notation "ACCOMPANYING AMENDMENT NO. 0007 TO SOLICITATION NO. DACA63-02-R-0017."
(The changes occur in paragraphs 10.8.3, 10.9 and 10.9.1)

3. Replacement Sections. - Replace the following sections with the accompanying new sections of the same number and title, each bearing the notation "ACCOMPANYING AMENDMENT NO. 0007 TO SOLICITATION NO. DACA63-02-R-0017:"

01001 DESIGN AND CONSTRUCTION SCHEDULE

01012 SUBMITTALS DURING DESIGN (The change occurs in paragraph 1.8.8.5 Government Design Review and Acceptance.)

END OF AMENDMENT

PRICE PROPOSAL SCHEDULE

IDIQ CONTRACT FOR DESIGN-BUILD REPLACE FAMILY HOUSING
DYESS AIR FORCE BASE
ABILENE, TEXAS

NAME OF CONTRACTOR: _____

ALTERNATE NO. 1

BASE BID: All work required by the Contract for Task Order #1 exclusive of work required by Option Bid Items.

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0001	**(AM#4) Design of 80 housing units (34 two bedroom units and 46 three bedroom units) with single car garages including all work within 5 feet of each building. Base Bid includes 5 accessible buildings.**				
		Job	**Sum**	*******	**$**_____
0002	**(AM#4) Design for all work outside of the building 5 foot line excluding work separately listed.**	**Job**	**Sum**	*******	**$**_____
0003	Construction of 80 housing units (34 two bedroom units and 46 three bedroom units) with single car garages including all work within 5 feet of each building. Base Bid includes 5 accessible buildings.	Job	Sum	***	$_____
0004	Construction for all work outside of the building 5 foot line excluding work separately listed.	Job	Sum	***	$_____
0005	Construction of six foot cedar privacy fencing with metal posts at 80 units:	***	***	***	**********
0005AA	a. Gates	_____	EA	$_____	$_____
0005AB	b. Fence	_____	LF	$_____	$_____
0006	Demolition of 84 units, related abatement, handling, and disposal of normal construction debris and regulated and hazardous waste products.	Job	Sum	***	$_____

PRICE PROPOSAL SCHEDULE

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0007	Final Record Drawings for all work (Base Bid and Options) (Task Order #1)	Job	Sum	***	$50,000
0008	**(AM#4) The monetary value for warranty work is established at 1 percent of the amount awarded for construction. See the Contract Specifications Section 01780 CLOSEOUT SUBMITTALS, paragraph "Contractor's Response to Construction Warranty Service Requirem**	***	***	***	**********
	TOTAL ALTERNATE NO. 1 BASE BID 0001-0008				$_____
0009	**OPTION NO. 1**: Additional cost for all work required by the Contract to design and construct One three-bedroom duplex building with single car garages (Two three bedroom units with party wall) OR two three-bedroom detached units.				
0009AA	All work within building(s) five foot line	Job	Sum	***	$_____
0009AB	All work outside the building(s) five foot line	Job	Sum	***	$_____
0009AC	Construction of six-foot cedar privacy fencing with metal posts at building	***	***	***	**********
0009AC01	a. Gates	_____	EA	$_____	$_____
0009AC02	b. Fence	_____	LF	$_____	$_____
	TOTAL OPTION NO. 1 0009AA-0009AC				$_____

PRICE PROPOSAL SCHEDULE

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0010	**OPTION NO. 2**: Additional cost for all work required by the Contract to design and construct One two-bedroom duplex building with single car garages (two two-bedroom units with party wall).				
0010AA	All work within building(s) five foot line	Job	Sum	***	$_____
0010AB	All work outside the building(s) five foot line	Job	Sum	***	$_____
0010AC	Construction of six-foot cedar privacy fencing with metal posts at building	***	***	***	**********
0010AC01	a. Gates	_____	EA	$_____	$_____
0010AC02	b. Fence	_____	LF	$_____	$_____
	TOTAL OPTION NO. 2 0010AA-0010AC				$_____
0011	**OPTION NO. 3**: Additional cost for all work required by the Contract to design and construct One three-bedroom detached Housing Unit with single car garage (one stand-alone three-bedroom housing unit).				
0011AA	All work within building(s) five foot line	Job	Sum	***	$_____
0011AB	All work outside the building(s) five-foot line	Job	Sum	***	$_____
0011AC	Construction of six-foot cedar privacy fencing with metal posts at building	***	***	***	**********
0011AC01	a. Gates	_____	EA	$_____	$_____
0011AC02	b. Fence	_____	LF	$_____	$_____
	TOTAL OPTION NO. 3 0011AA-0011AC				$_____
0012	**OPTION NO. 4**: Additional cost for all work required by the Contract to increase all 3-BR units in Base Bid from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.				
		Job	Sum	***	$_____

PRICE PROPOSAL SCHEDULE

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0013	**OPTION NO. 5**: Additional cost for all work required by the Contract to increase all 2 BR units in Base Bid from single car to two car garage. Garage design requires single door spanning opening. Option includes ½ hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.	Job	Sum	***	$_____
0014	**OPTION NO. 6**: Additional cost for all work required by the Contract to increase new Play Lots from one to two. Second Play Lot includes associated Common Area.	Job	Sum	***	$_____
0015	**OPTION NO. 7**: Additional cost for all work required by the Contract to provide and install ceiling fans and controls in each bedroom, family room, and living room in all units in the Base Bid.	Job	Sum	***	$_____
0016	**OPTION NO. 8**: Additional cost for all work required by the Contract to provide and install ceiling fans and controls in each bedroom, family room, and living room in the five units included as Options 1, 2 & 3.	Job	Sum	***	$_____
0017	**OPTION NO. 9**: Additional cost for all work required by the Contract to increase all 3-BR units in Option 1 from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.	Job	Sum	***	$_____
0018	**OPTION NO. 10**: Additional cost for all work required by the Contract to increase all 2-BR units in Option 2 from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.	Job	Sum	***	$_____
0019	**OPTION NO. 11**: Additional cost for all work required by the Contract to increase 3-BR units in Option 3 from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.	Job	Sum	***	$_____
	TOTAL ALTERNATE NO. 1 BASE BID (BASE BID PLUS ALL OPTIONS)				$_____

PRICE PROPOSAL SCHEDULE

PROJECT COMPLETION TIME

0020 **(AM#4) BASE BID: Completion Time for all work (Task Order #1), including all Bid Options (NOT to exceed the maximum time stated in Section 01001 DESIGN AND CONSTRUCTION SCHEDULE).**

BASE BID (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0021 **(AM#4) BASE BID: Completion time required for all work to construct the Base Bid (Task Order #1), excluding all Bid Options.**

BASE BID (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0022 **(AM#4) OPTION NO. 1: Additional time required for all work for Option No. 1 (Task Order #1).**

OPTION NO. 1 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0022 **(AM#4) OPTION NO. 2: Additional time required for all work for Option No. 2 (Task Order #1)..**

OPTION NO. 2 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0023 **(AM#4) OPTION NO. 3: Additional time required for all work for Option No. 3 (Task Order #1)..**

OPTION NO. 3 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0024 **(AM#4) OPTION NO. 4: Additional time required for all work for Option No. 4 (Task Order #1).**

OPTION NO. 4 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0025 **(AM#4) OPTION NO. 5: Additional time required for all work for Option No. 5 (Task Order #1).**

OPTION NO. 5 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0026 **(AM#4) OPTION NO. 6: Additional time required for all work for Option No. 6 (Task Order #1).**

OPTION NO. 6 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0027 **(AM#4) OPTION NO. 7: Additional time required for all work for Option No. 7 (Task Order #1).**

OPTION NO. 7 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0028 **OPTION NO. 8: Additional time required for all work for (AM#7) Option No. 8 (Task Order #1).**

OPTION NO. 8 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0029 **(AM#4) OPTION NO. 9: Additional time required for all work for Option No. 9 (Task Order #1).**

OPTION NO. 9 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0030 **(AM#4) OPTION NO. 10: Additional time required for all work for Option No. 10 (Task Order #1).**

OPTION NO. 10 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0031 **(AM#4) OPTION NO. 11: Additional time required for all work for Option No. 11 (Task Order #1).**

OPTION NO. 11 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

PRICE PROPOSAL SCHEDULE

IDIQ CONTRACT FOR DESIGN-BUILD REPLACE FAMILY HOUSING
DYESS AIR FORCE BASE
ABILENE, TEXAS

NAME OF CONTRACTOR: _____

(AM#4) ALTERNATE NO. 2

Completion Time for the Base Bid and Options Nos. 1, 2, and 3 is 435 calendar days.

BASE BID: All work required by the Contract for Task Order #1 exclusive of work required by Option Bid Items.

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0001	Design of 80 housing units (34 two bedroom units and 46 three bedroom units) with single car garages including all work within 5 feet of each building. Base Bid includes 5 accessible buildings.	Job	Sum	***	$_____
0002	Design for all work outside of the building 5 foot line excluding work separately listed.	Job	Sum	***	$_____
0003	Construction of 80 housing units (34 two bedroom units and 46 three bedroom units) with single car garages including all work within 5 feet of each building. Base Bid includes 5 accessible buildings.	Job	Sum	***	$_____
0004	Construction for all work outside of the building 5 foot line excluding work separately listed.	Job	Sum	***	$_____
0005	Construction of six foot cedar privacy fencing with metal posts at 80 units:	***	***	***	**********
0005AA	a. Gates	_____	EA	$_____	$_____
0005AB	b. Fence	_____	LF	$_____	$_____

PRICE PROPOSAL SCHEDULE

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0006	Demolition of 84 units, related abatement, handling, and disposal of normal construction debris and regulated and hazardous waste products.	Job	Sum	***	$_____
0007	Final Record Drawings for all work (Base Bid and Options) (Task Order #1)	Job	Sum	***	$50,000
0008	The monetary value for warranty work is established at 1 percent of the amount awarded for construction. See the Contract Specifications Section 01780 CLOSEOUT SUBMITTALS, paragraph "Contractor's Response to Construction Warranty Service Requirements."	***	***	***	**********
	TOTAL ALTERNATE NO. 2 BASE BID 0001-0008				$_____
0009	OPTION NO. 1: Additional cost for all work required by the Contract to design and construct One three-bedroom duplex building with single car garages (Two three bedroom units with party wall) OR two three-bedroom detached units.				
0009AA	All work within building(s) five foot line	Job	Sum	***	$_____
0009AB	All work outside the building(s) five foot line	Job	Sum	***	$_____
0009AC	Construction of six-foot cedar privacy fencing with metal posts at building	***	***	***	**********
0009AC01	a. Gates	_____	EA	$_____	$_____
0009AC02	b. Fence	_____	LF	$_____	$_____
	TOTAL OPTION NO. 1 0009AA-0009AC				$_____

PRICE PROPOSAL SCHEDULE

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0010	**OPTION NO. 2: Additional cost for all work required by the Contract to design and construct One two-bedroom duplex building with single car garages (two two-bedroom units with party wall).**				
0010AA	All work within building(s) five foot line	Job	Sum	***	$_____
0010AB	All work outside the building(s) five foot line	Job	Sum	***	$_____
0010AC	Construction of six-foot cedar privacy fencing with metal posts at building	***	***	***	**********
0010AC01	a. Gates	_____	EA	$_____	$_____
0010AC02	b. Fence	_____	LF	$_____	$_____
	TOTAL OPTION NO. 2 0010AA-0010AC				$_____
0011	**OPTION NO. 3: Additional cost for all work required by the Contract to design and construct One three-bedroom detached Housing Unit with single car garage (one stand-alone three-bedroom housing unit).**				
0011AA	All work within building(s) five foot line	Job	Sum	***	$_____
0011AB	All work outside the building(s) five-foot line	Job	Sum	***	$_____
0011AC	Construction of six-foot cedar privacy fencing with metal posts at building	***	***	***	**********
0011AC01	a. Gates	_____	EA	$_____	$_____
0011AC02	b. Fence	_____	LF	$_____	$_____
	TOTAL OPTION NO. 3 0011AA-0011AC				$_____
0012	**OPTION NO. 4: Additional cost for all work required by the Contract to increase all 3-BR units in Base Bid from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.**	Job	Sum	***	$_____

PRICE PROPOSAL SCHEDULE

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	EXTENDED AMOUNT
0013	**OPTION NO. 5: Additional cost for all work required by the Contract to increase all 2 BR units in Base Bid from single car to two car garage. Garage design requires single door spanning opening. Option includes ½ hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.**	**Job**	**Sum**	***	$_____
0014	**OPTION NO. 6: Additional cost for all work required by the Contract to increase new Play Lots from one to two. Second Play Lot includes associated Common Area.**	**Job**	**Sum**	***	$_____
0015	**OPTION NO. 7: (AM#7) Additional cost for all work required by the Contract to provide and install ceiling fans and controls in each bedroom, family room, and living room in all units in the Base Bid.**	**Job**	**Sum**	***	$_____
0016	**OPTION NO. 8: Additional cost for all work required by the Contract to provide and install ceiling fans and controls in each bedroom, family room, and living room in the five units included as Options 1, 2 & 3.**	**Job**	**Sum**	***	$_____
0017	**OPTION NO. 9: Additional cost for all work required by the Contract to increase all 3-BR units in Option 1 from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.**	**Job**	**Sum**	***	$_____
0018	**OPTION NO. 10: Additional cost for all work required by the Contract to increase all 2-BR units in Option 2 from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.**	**Job**	**Sum**	***	$_____
0019	**OPTION NO. 11: Additional cost for all work required by the Contract to increase 3-BR units in Option 3 from single-car to two-car garage. Garage design requires single-door spanning opening. Option includes ½-hp electric garage door opener with 2 remotes and hardwired control at entry to each unit.**	**Job**	**Sum**	***	$_____
	TOTAL ALTERNATE NO. 2 BASE BID (BASE BID PLUS ALL OPTIONS)				$_____

PROJECT COMPLETION TIME

0020	**OPTION NO. 4: Additional time required for all work for Option No. 4 (Task Order #1). OPTION NO. 4 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP**				

PRICE PROPOSAL SCHEDULE

0021 **OPTION NO. 5: Additional time required for all work for Option No. 5 (Task Order #1).**
OPTION NO. 5 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0022 **OPTION NO. 6: Additional time required for all work for Option No. 6 (Task Order #1).**
OPTION NO. 6 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0023 **OPTION NO. 7: Additional time required for all work for Option No. 7 (Task Order #1).**
OPTION NO. 7 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0024 **OPTION NO. 8: Additional time required for all work for (AM#7) Option No. 8 (Task Order #1).**
OPTION NO. 8 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0025 **OPTION NO. 9: Additional time required for all work for Option No. 9 (Task Order #1).**
OPTION NO. 9 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0026 **OPTION NO. 10: Additional time required for all work for Option No. 10 (Task Order #1).**
OPTION NO. 10 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

0027 **OPTION NO. 11: Additional time required for all work for Option No. 11 (Task Order #1).**
OPTION NO. 11 (Task Order #1) COMPLETION TIME: _____ Calendar days from NTP

PRICE PROPOSAL SCHEDULE

NOTES:

1. ARITHMETIC DISCREPANCIES (EFARS 14.407-2)

(a) For the purpose of initial evaluation of bids, the following will be utilized in resolving arithmetic discrepancies found on the face of the bidding schedule as submitted by bidders:

(1) Obviously misplaced decimal points will be corrected;

(2) In case of discrepancy between unit price and extended price, the unit price will govern;

(3) Apparent errors in extension of unit prices will be corrected; and

(4) Apparent errors in addition of lump-sum and extended prices will be corrected.

(b) For the purpose of bid evaluation, the Government will proceed on the assumption that the bidder intends his bid to be evaluated on the basis of the unit prices, the totals arrived at by resolution of arithmetic discrepancies as provided above and the bid will be so reflected on the abstract of bids.

(c) These correction procedures shall not be used to resolve any ambiguity concerning which bid is low.

2. If a modification to a bid based on unit prices is submitted, which provides for a lump sum adjustment to the total estimated cost, the application of the lump sum adjustment to each unit price in the bid schedule must be stated. If it is not stated, the bidder agrees that the lump sum adjustment shall be applied on a pro rata basis to every unit price in the bid schedule.

3. Bidders must bid on all items.

4. Failure to insert prices for each item in the Bidding Schedule may cause the proposal to be rejected.

5. Costs attributable to Division 01 - General Requirements are assumed to be prorated among bid items listed.

6. Responders are advised that this requirement may be delayed, cancelled or revised at any time during the solicitation, selection, evaluation, negotiation and/or final award process based on decisions related to DOD changes in force structure and disposition of the Armed Forces.

7. The Army will procure this housing through a design and cost competition in accordance with the provisions set forth in this Request for Proposals (RFP). When a contract is awarded, it will be a "Firm Fixed Price Contract."

PRICE PROPOSAL SCHEDULE

8. The Congress, in authorizing and funding this Contract, has established certain cost limitations for the project. The design and construction cost limitation for Task Order #1 is $13,341,000. The Government reserves the right to reject any proposals that exceed the cost limitation. However, the Government may choose to award at more than the cost limitation if deemed in the best interest of the Government to do so, subject to the availability of funds." Submission of desirable alternative features exceeding minimum requirements may be considered as long as award can be made within the established funds.

9. Any proposal which is materially unbalanced as to prices for the Base Schedule may be rejected. An unbalanced proposal is one which is based on prices significantly less than the cost for some work and prices which are significantly overstated for other work and can also exist where only overpricing or underpricing exists.

6. (AM#4) ALTERNATE BIDS

Bidders shall bid on both Alternates. Government will evaluate bids on lowest total project cost including Alternate No. 1 or Alternate No. 2, whichever produces the lowest bid total.

11. (AM#4) EXERCISE OF OPTIONS (SWDR 715-1-1 (16 January 1996))

The Government reserves the right to exercise the option(s) by written notice to the Contractor either singularly or in any combination for up to 90 calendar days after award of the Base Bid without an increase in the Offeror's Bid Price. Completion of added items shall continue at the same schedule as the Base Bid unless otherwise noted in Section 01000 CONSTRUCTION SCHEDULE, paragraph 1 entitled SCHEDULE.

12. ABBREVIATIONS

For the purpose of this solicitation, the units of measure are represented as follows:

a. HR (hour)
b. LS (lump sum)
c. mm (millimeter)

END OF PRICE PROPOSAL SCHEDULE

PART 10 - HOUSING UNIT STRUCTURAL DESIGN

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10 HOUSING UNIT STRUCTURAL DESIGN

10.1 SECTION SUMMARY

General: The structural criteria established herein shall be used for structural loading, design and installation of all structural systems and foundations, including manufacturing, erection, and supervision, testing, and quality assurance of the completed installation of the housing units. All structural calculations shall be checked and initialed as such by a registered structural engineer other than the original design engineer. Refer to the Foundation Design Analysis contained in the Preliminary Geotechnical Report as prepared by the Corps of Engineers for all foundation requirements and recommendations. The structural work generally consists of design, using the DESIGN LOADS and DESIGN CRITERIA below, and of construction of but not limited to:

(1) Foundations.
(2) Retaining Walls.
(3) Load Bearing and Non-Load Bearing Walls.
(4) Vertical Framing Members.
(5) Horizontal Framing Members, including roof decks and diaphragms, roof beams and joists.
(6) Interconnection Details including all fastening requirements.
(7) Special Conditions, such as expansion, construction, and control joints, and changes in floor levels.
(8) Appendix provisions for architectural, mechanical, and electrical elements.
(9) Site fencing structure and foundations.

10.2 REFERENCES

Design methods and stress allowances or load factors for the various structural materials shall be in accordance with the current editions of the codes and specifications listed in the table below. Recommendations made in the codes, specifications and industry standards in this paragraph are requirements of this RFP, unless specified otherwise in this RFP.

American Concrete Institute (ACI 318-02), Building Code Requirements for Reinforced Concrete.

American Concrete Institute (ACI 302), Guide for Concrete Floors and Slab Construction.

American Institute of Steel Construction (AISC), Manual of Steel Construction, Load and Resistance Factor Design

American Institute of Steel Construction (AISC), Design of Cold Formed Steel Structural Members, Latest Edition.

American Plywood Association, "APA Design/Construction Guide".

American Welding Society (AWS), Structural Welding Code

Federal Manufactured Housing Construction and Safety Act (FMHCSS)

International Building Code 2000 (IBC).

Southwestern Division, Design Criteria Architectural and Engineering Instructions Manual (AEIM), October 2000 (http://www.swf.usace.army.mil/eandc/ec-a/2000aeim.html)

Preliminary Geotechnical Report (see Appendix 1 of this RFP)

10.3 DESIGN

10.3.1 GENERAL

The overall structural system shall be selected based on durability, maintainability, and cost-effectiveness. {AM#0003}_____. The lateral support system shall be selected from conventional industry standard systems and shall be compatible with the vertical load carrying system. The design drawings shall contain in the General Notes a list of the design loading criteria, a list of the strengths of the engineering materials used, the design soil values and any other data that would be pertinent to remodeling and/or future additions. Structural calculations to substantiate the structural design shall be submitted in accordance with the requirements of Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES.

10.3.2 DEAD LOADS

The structural system shall be designed and constructed to safely support all dead loads, permanent or temporary, including self weight, partitions, insulation, ceiling, floor covering, and all equipment that is fixed in position.

10.3.3 ROOF LIVE LOADS

Roofs shall be designed to support live loads, snow loads, including drifting snow, sliding snow, and rain on snow, and support wind loads including components and cladding in accordance with the IBC 2000 Edition. Snow loads, full or unbalanced, shall govern where such loading will result in larger members at connections. Other criteria is as follows:

(1) Basic Wind Speed - 90 mph.
(2) Minimum Roof Live Load - 20 psf.
(3) Ground Snow Load - 5 psf.

If the design roof snow loading is less than 20 pounds per square foot, a minimum roof live loading for construction and maintenance of 20 pounds per square foot shall be used for design of the structure. This roof live loading is in lieu of and not in addition to the snow loading. However, unbalanced snow loads, sliding and drifting snow (in particular areas), or wind loads may be the controlling load case for particular elements.

10.3.4 FLOOR LIVE LOADS

Living Space	40 psf
Exterior Porches and Corridors	60 psf
Stairs (Concentrated Load)	300 lb
Uninhabitable Attics without storage	10 psf

10.3.5 LATERAL LOADS

10.3.5.1 Horizontal Loads (Acting Inward and Outward)

The structural system wind design, including components and cladding, shall be designed in accordance with the {AM#0003} IBC 2000 based on the following criteria:

(1) Basic Wind Speed - 90 mph.
(2) Exposure "C".
(3) Important Factor - 1.0.

10.3.5.2 Seismic Loads

Seismic design for this project will be in accordance with the ACC Seismic Design Criteria for New Construction Memorandum dated 9 September, 1998 (See Appendices). This document states that the 1997 Edition of the National Earthquake Hazard Reduction Program (NEHRP) establishes the new seismic design criteria for all new Air Force projects. Dyess AFB is located within Seismic Design Category A, per 1997 edition of NEHRP. As such, no specific seismic design requirements exist for these housing units.

10.4 DESIGN CRITERIA

10.4.1 GENERAL

The design drawings shall contain General Notes which shall contain a list of the design loading criteria, a list of the strengths of the engineering materials used, the design soil values, a fastening schedule, and any other data that would be pertinent to remodeling and/or future additions.

Walls mostly below grade that are supported laterally by diaphragms at or near the top and bottom, shall be designed using loadings based on at-rest soil pressures.

Freestanding earth retained walls shall be loaded with active soil pressure and surcharge loading if present, and with this loading the vertical resultant shall be in the middle 1/3 of the footing base width. For this design, factors of safety for overturning and sliding shall be at least 1.2. Retaining walls shall be constructed of reinforced concrete only. Weep holes shall be provided in the wall to eliminate saturated soil conditions behind the wall.

Diaphragms shall have continuous chord members on all edges and shall have direct positive connection for transferring load to all members of the main lateral force resisting system.

Sheetrock wall covering shall not be used as a lateral resisting element of the lateral design.

10.4.2 MINIMUM FOOTING DEPTH

The minimum footing depth from bottom of footing to finish grade for frost penetration and/or earth cover shall be 18 inches unless noted otherwise.

10.4.3 FOUNDATION DESIGN

The foundation system shall be as indicated in the Foundation Design Analysis as contained in the Preliminary Geotechnical Report (see Appendix 1).

10.4.4 ROOF SLOPE

See PART 9, Table 9-10 of Section 01000 for slope requirements.

10.4.5 SERVICEABILITY

10.4.5.1 Foundation Settlement Strength

An adequate level of protection against structural failure due to uniform and/or differential foundation settlement or general shear shall be provided.

10.4.5.2 Vertical Deflection of Suspended Horizontal Framing Members

Building serviceability shall not be impaired by vertical deflections. The sum of the instantaneous vertical deflections due to live load plus long-term sustained load deflections shall not exceed the span divided by:

(1) 240 at roofs.
(2) 600 at masonry lintels for masonry walls.

10.4.5.3 Horizontal Deflection

Horizontal deflection shall not exceed the limits set forth in the IBC 2000 Edition when the structure is subjected to the required seismic or wind loads.

10.4.5.4 Ultimate Strength of Structural Elements

An adequate level of protection against structural failure under extreme loads shall be provided. The proposer shall check the usual loading conditions for normal factors of safety and the extreme loading conditions, if present, for appropriate (unusual) factors of safety to provide levels of protection appropriate for the conditions.

10.4.6 CONSTRUCTION TOLERANCES

Allowable variations from level, or specific slopes, shall be as follows:

(1) For overall length, or surface of 10 feet or less: plus or minus 1/8-inch.
(2) Up to 20 feet: plus or minus 1/4-inch.
(3) Up to 40 feet: plus or minus 3/8-inch.

10.4.7 DURABILITY

Structural components shall be protected from condensed moisture that could impair their structural adequacy through deterioration.

Special attention shall be given to protection for corrosion or oxidation of metals, decay of wood and wood base materials, spalling of concrete, leaching of mortar, and deterioration of adhesives. Prevention of these hazards shall be especially important.

The materials used in structural elements, components, and assemblies shall be resistant to or protected from damage by exposure to normal climatic conditions.

10.5 CONCRETE DESIGN

10.5.1 GENERAL

All concrete shall have a minimum compressive strength of 3000 psi at 28 days unless noted otherwise. All foundation walls and footings shall be constructed of reinforced cast-in-place concrete.

10.5.2 TESTING

Testing of concrete work shall be done at the proposer's expense by an approved independent testing laboratory.

10.5.3 FORMS

Materials for forms shall be plywood, metal, metal-framed, aluminum, reinforced fiberglass, or plywood-faced, to provide continuous, straight, smooth, exposed surfaces. Forms shall not be left in place.

10.5.4 REINFORCING MATERIALS

Reinforcing Bars: ASTM A 615, minimum Grade 40, deformed.

10.5.5 CONCRETE MATERIALS

(1) Cement: ASTM C 150, Type I-II Portland cement low alkali (0.6% or less).
(2) Fine Aggregate: ASTM C 33.
(3) Coarse Aggregate: ASTM C 33.
(4) Air-Entraining Admixture: ASTM C 260.
(5) Flowing Concrete Admixture: ASTM C 1017, Type 1 or 2.
(6) Calcium Chloride will not be permitted.
(7) Fly Ash: ASTM C 618, Class "F"; fly ash content shall not exceed 20 percent of cement content or 100 pounds of fly ash per cubic yard of concrete, whichever is less.

10.5.6 VAPOR BARRIER

Provide under all interior floor slabs. Polyethylene sheet not less than 6 mils thick. Provide 4-inch capillary water barrier under the vapor barrier.

10.5.7 CURING COMPOUND

Liquid type membrane-forming curing compound complying with ASTM C 309, Type I, Class A or B.

10.5.8 READY-MIX CONCRETE

Ready-mix concrete shall be in accordance with ASTM C 94.

10.5.9 FOUNDATION SYSTEMS

The foundation system shall conform to the minimum requirements for a "Ribbed-Mat Slab" foundation system as specified in the Preliminary Geotechnical Report (See Appendix 1). {AM#0003} Conventionally reinforced foundations are required; post tension construction is not acceptable in this application. Also see Section 02364A of the RFP for termite protection requirements.

10.5.10 CONDUITS AND PIPES

Horizontal runs of conduits and pipes will not be embedded in foundation ribs and slabs supported by ground. Vertical penetrations will conform to ACI 318-02. Aluminum conduit and pipe shall not be embedded in any concrete structure.

10.5.11 SLAB JOINTS

Slab crack control joints may be construction joints, expansion joints, or weakened plane joints consisting of plastic insert "T" strips (minimum depth shall be 1/4 depth of slab thickness) placed in the fresh concrete. Saw cut joints will not be allowed. Reinforcement will be interrupted at (2 inches clear each side) crack control joints. Bars shall be located at mid-depth or the slab, and starting 2 inches from the edge of slab. The ends of crack control and corners of isolation joints will meet at a common point so far as practical. Stop reinforcing at expansion joints and provide smooth slip dowels (minimum 1/2-inch diameter) across the joint (dowels shall be ASTM A 615 material, plain bars).

When thickened slabs are employed under column bases or partitions, crack control joints parallel to the thickened slabs shall be offset from the thickened areas.

Walls, when used or required for lateral resistance to wind or earthquake, shall be founded on a full foundation.

Reentrant corners in slabs will be reinforced with a minimum of one No. 4 bar at 45 degrees to the corner.

10.6 MASONRY DESIGN

Provide solid brick where cores in cored brick might be exposed.

Joints shall be 3/8-inch, tooled concave, Type "S" mortar.

Ties shall be corrugated galvanized steel, 22 gage minimum, length to extend to 3/4-inch from brick face. Space ties a maximum of 24 inches on centers vertically and 16 inches on center horizontally.

Installation of brickwork shall comply with the latest edition of the Brick Institute of America Technical Notes No. 28; Brick Veneer, New Construction.

10.7 STEEL DESIGN

10.7.1 STRUCTURAL STEEL DESIGN

The detailing of structural steel framing, if used, shall be complete including connections. All weld types, weld sizes, bolt layouts, bolt sizes, connection plates, members sizes and locations, and stiffener plates sizes and locations shall be shown.

All members, elements, and connections that are a part of the main vertical and/or lateral force resisting system must be completely detailed.

{AM#0003}_____.

10.7.2 STRUCTURAL COLD FORMED STEEL FRAMING DESIGN

Cold formed steel structural framing design shall comply with the American Institute of Steel Construction (AISC), Design of Cold Formed Steel Structural Members, Latest Edition, except as herein noted.

The detailing of cold formed steel structural framing, including connections, shall be complete. All welded connections, metal connectors, bolt layouts, bolt sizes, screw fastener patterns, and screw sizes shall be shown in details, notes and calculations. All members that are a part of the main vertical and lateral force resisting system must be completely detailed.

Walls, when used or required for lateral resistance to wind or seismic, shall be considered bearing walls.

10.7.3 STRUCTURAL VERTICAL WALL FRAMING

Structural vertical (load bearing and non-load bearing) wall framing shall be no less than 3-1/2 inches wide, C-shaped, at 16 inches on center maximum spacing. Framing for all exterior walls shall be 18-gage thickness minimum, and framing for interior walls shall be 20-gage thickness minimum. Vertical studs which are attached to diagonal steel tension strap bracing shall have three horizontal rows of equally spaced solid blocking (blocking shall be the same size member as the vertical studs) between the studs for the horizontal distance of the brace. Double vertical wall studs shall be located under the point of connection of the diagonal brace to the top track of the wall. The bottom of the diagonal tension braces shall be attached with Phillips pan head self-tapping screws (number of screws shall be calculated) to a minimum 12 gage thick, L-shaped anchor plate which shall be anchored to the foundation system with a minimum of two 3/8-inch diameter anchor bolts. Wall framing shall be attached to the foundation with minimum 3/8-inch diameter washer on top of the bottom wall track at each anchor bolt. All vertical studs shall be attached with a minimum of one Phillips pan head self-tapping screw to each flange of the wall top and bottom runner tracks. Welding will not be permitted for material less than 18 gage thickness. Interior non-load bearing walls can be a minimum 3-1/2 inches wide, C-shaped, 25-gage minimum thickness at 16 inches on center maximum spacing.

10.7.4 ROOF TRUSSES

Roof trusses shall be designed for the loads indicated. The truss diagonal members and top and bottom chords shall be custom rolled shapes, with a minimum 20-gage thickness, such that the truss is a concentric design. The end of the trusses for the overhang outriggers shall be a combination of metal stud units and the custom top chord unit. The design of trusses shall be integrated into the vertical and lateral load carrying systems. Truss member connections (chord and diagonal members) shall be fastened together with self-tapping screws sized for member axial loads and any eccentricity of the members. {AM#0003}_____. {AM#0003} Truss system shall be designed in accordance with IBC 2000 and IRC 2000.

10.8 WOOD

10.8.1 GENERAL

Wood shall conform to the requirements of IBC 2000 and the following:

10.8.2 STRUCTURAL WOOD DESIGN

The detailing of structural wood framing, if used, shall be complete including connections. All members, elements, and connections that are part of the main vertical and/or lateral force resisting system must be completely detailed. All metal connectors, bolt layouts, bolt sizes, nailing patterns and nail sizes shall be shown in details, notes and calculations. Staples shall not be used for the connections.

Wood stud spacing not to exceed 16 inches on center.

10.8.3 WOOD TREATMENT

(AM#7) All wood shall be treated in accordance with American Wood Preservers Association, **AWPA, C-2, C-9 or C-31** for above ground application. Wood that can come in physical contact with people such as decking and railing shall not contain arsenic based preservatives.

10.9 SHEATHING

Wood sheathing design shall comply with the IBC 2000 Edition except herein noted.

(AM#7) Termite Protection: All wood used for sheathing shall be treated in accordance with American Wood Preservers Association, **AWPA, C-2, C- 9 or C-31** for above ground application. See Section 02364A of the RFP for additional termite protection requirements.

The detailing of wood sheathing, including connections, shall be complete. All metal connectors, bolt layouts, bolt sizes, nailing patterns and nail sizes shall be shown in details, notes and calculations. Staples shall not be used for the connections. All members that are a part of the lateral force resisting system must be completely detailed.

10.9.1 ROOF SHEATHING

(AM#7) Roof sheathing shall be plywood APA RATED STRUCTURAL I or II SHEATHING, 5/8-inch minimum thickness. Joints shall be tongue and grooved or be square edges provide with H clips. All roof sheathing laid shall be covered with felt by the end of each day or when a storm is approaching. Roof sheathing damaged due to moisture shall be replaced. **Roof sheathing shall be nailed to the Structure using galvanized, Ring or Spiral Shank Nails.**

10.9.2 STRUCTURAL WALL SHEATHING

Wood structural panels, if used, shall be as defined by IBC 2000 Edition. Particle board and fiberboard shall not be used in structural applications.

10.9.3 STEEL STRAP TENSION BRACING

Straps shall be a minimum 14 gage thickness by a minimum 2 inches wide. Straps shall be fastened to flange of each intersecting vertical wall stud, to the wall top runner track flange and to the metal plate anchor at the bottom of the walls with Phillips pan head self-tapping screws. Calculations shall be provided for the design of the size and number of the screw fasteners.

10.10 CONSTRUCTION

10.10.1 FOUNDATION WALLS

Foundation wall shall be constructed of reinforced concrete or masonry.

Foundations walls shall extend at least 8 inches above finish grade.

Foundation walls supporting basements shall have a foundation drainage system installed around the foundation perimeter in accordance with IBC 2000.

10.10.2 SLABS-ON-GRADE

Concrete slabs-on-grade shall be {AM#0003}_____designed as a monolithic ribbed mat slab for bidding purposes. See Preliminary Geotechnical Report in Appendices for additional details. Bond breaker, such as building felt, shall be used between slab edges and abutting vertical surfaces.

Slabs shall be damproofed in accordance with IBC 2000.

{AM#0003}_____.

Crack control measures shall be incorporated into slab construction. Area of sections bounded by crack control joints shall be approximately square shall not exceed 225 square feet, and distance between crack control joints will not exceed 15 feet. All slab crack control joints, joints between edges of slabs and vertical surfaces, and any mechanical, plumbing or electrical penetrations through the floor slab shall be sealed with a flowable polyurethane caulk. Interior slabs shall be given a steel troweled finish.

10.10.3 {AM#0003} DELETED

SECTION 01001

DESIGN AND CONSTRUCTION SCHEDULE
03/2002
AMENDMENTS NO. 0002, 0003, 0004 and 0007

PART 1 GENERAL

1.1 SCHEDULE

Commence, prosecute, and complete the work under this contract in accordance with the following schedule and Section 00700 CONTRACT CLAUSES clauses COMMENCEMENT, PROSECUTION AND COMPLETION OF WORK and LIQUIDATED DAMAGES:

Item of Work	Commencement of Work (calendar days)	Completion of Work (calendar days)	Liquidated Damages per calendar day[1]
(1) **(AM#4) Alternate 1:** Completion of all design and construction work for Task Order No. 1 (Base Bid and all options), FY03 Replace 85 Family Housing Units, except Establishment of Turf and Landscaping	Within 10 calendar days after receipt of Notice of Proceed	550	$1,400.00

Item of Work	Commencement of Work (calendar days)	Completion of Work (calendar days)	Liquidated Damages per calendar day[1]_ __
(2) (AM#4) Alternate 2: Completion of all design and construction work for Task Order No. 1 (Base Bid and Options 1,2, & 3), FY03 Replace 85 Family Housing Units, except Establishment of Turf and Landscaping	**Within 10 calendar days after receipt of Notice of Proceed**	**(AM#7) 435**	**$1,400.00**
(3) Establishment of Turf	**	**	---
(4) Landscaping	***	***	---

[1]NOTES:

a. The Contract duration stated above for Work Item 1 is the maximum duration until Contract Award. Upon Contract Award, the Contractor's proposed duration as stated on the Price Proposal Schedule shall become the contract duration for this Work Item. The liquidated damages stated above will be applied for each calendar day the Contractor exceeds the Contract scheduled duration.

b. See Section 01012 SUBMITTALS DURING DESIGN and Section 01001, DESIGN AND CONSTRUCTION SCHEDULE, paragraph "SEQUENCE OF DESIGN/CONSTRUCTION," concerning start of construction.

c. For construction planning purposes Government review time for review submittals (100% site and utility and 60% buildings design, and 100% buildings design) is specified in 01012 SUBMITTALS DURING DESIGN.

d. Delay in completion of design will not be considered as a valid reason to delay completion of entire work.

e. Deleted (AM#7)

*Establishment of Turf

Planting and maintenance for turfing shall be in accordance with Contractor's Section for TURFING . No payment will be made for establishment of turf until all requirements of the section are adequately performed and accepted, as determined by the Contracting

Officer.

**Landscaping

Planting and maintenance for landscaping shall be in accordance with Contractor's Section for LANDSCAPING. No payment will be made for landscaping until all requirements of the section are adequately performed and accepted, as determined by the Contracting Officer.

1.1.1 Testing of Heating and Air-Conditioning Systems

The times stated for completion of this project includes all required testing specified in appropriate specification sections of heating, air conditioning and ventilation systems including HVAC Commissioning. Exception: boiler combustion efficiency test, boiler full load tests, cooling tower performance tests, and refrigeration equipment full load tests, when specified in the applicable specifications, shall be preformed in the appropriate heating/cooling season as determined by the Contracting Officer.

1.2 TIME EXTENSIONS FOR UNUSUALLY SEVERE WEATHER (OCT 1989)
(ER 415-1-15)(52.0001-4038 1/96)

a. This provision specifies the procedure for determination of time extensions for unusually severe weather in accordance with the contract clause entitled "Default: (Fixed Price Construction)." In order for the Contracting Officer to award a time extension under this clause, the following conditions must be satisfied:

(1) The weather experienced at the project site during the contract period must be found to be unusually severe, that is, more severe than the adverse weather anticipated for the project location during any given month.

(2) The unusually severe weather must actually cause a delay to the completion of the project. The delay must be beyond the control and without the fault or negligence of the contractor.

b. The following schedule of monthly anticipated adverse weather delays due to precipitation and temperature is based on National Oceanic and Atmospheric Administration (NOAA) or similar data for the project location and will constitute the base line for monthly weather time evaluations. The contractor's progress schedule must reflect these anticipated adverse weather delays in all weather dependent activities. Wind is not considered in the Monthly Anticipated Adverse Weather Calendar Day Schedule.

MONTHLY ANTICIPATED ADVERSE WEATHER DELAY
WORK DAYS BASED ON (5) DAY WORK WEEK
ABILENE, TX AREA (DYESS AFB AND RESERVE CTRS. WITHIN 80 MILE RADIUS, EXCEPT WITHIN 40 MILES OF SAN ANGELO,TX.)

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2	2	2	2	4	3	3	2	3	3	1	2

c. Upon acknowledgment of the Notice to Proceed (NTP) and continuing throughout the contract, the contractor will record on the daily CQC report, the occurrence of adverse weather and resultant impact to normally scheduled work. Actual adverse weather delay days must prevent work on critical activities for 50 percent or more of the contractor's scheduled

work day.

The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month), be calculated chronologically from the first to the last day of each month, and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of days anticipated in paragraph "b", above, the Contracting Officer will convert any qualifying delays to calendar days, giving full consideration for equivalent fair weather work days, and issue a modification in accordance with the contract clause entitled "Default (Fixed Price Construction)."

1.3 ORDER OF WORK

1.3.1 Phasing

1. **(AM#2) New Construction and Demolition Phasing**

a. As set forth in a subsequent paragraph, the Government desires to accept new housing units in groups before the total project has been completed.

b. Demolition of existing housing units will not commence until occupants can be relocated to new housing with the following exceptions:

- The Government will have 7 duplex buildings (14 of 84 units) available for demolition on 1 January 2003.

- Contractor will not be required to initiate demolition on the partial set of units to be demolished except for the duplex building to be demolished to gain access to the Contractor Staging Site. That building is in addition to the 14 units available in January and will be available for demolition upon approval of demolition related design and administrative requirements.

- The Government may elect to make additional units available for demolition as they become available as new units are turned over and occupants vacate existing and move into new units.

2. **(AM#2) The Contractor will be given Task Order No. 1 (FY03 Replace 85 Family Housing Units) at Contract Notice to Proceed. Prior to or upon completion of Task Order No. 1, another task order may be negotiated with the Contractor to design and build another group of units.**

3. Project Fence: In accordance with Section 01500 TEMPORARY CONSTRUCTION FACILITIES AND CONTROL, the Contractor shall construct a temporary project security fence around the project site. After approval and construction of this fence, the project site will be considered to be off-base and not under base security. On completion of the Contract, the Contractor shall remove the fence and gates in accordance with Section 01500 TEMPORARY CONSTRUCTION FACILITIES AND CONTROL.

4. The Contractor shall construct prototypes of each housing unit type as defined below.

5. The Contractor shall complete and turn over housing units **(AM#2) in groups of housing units, no less than 8 units nor more than 20 units at a time**. Adjust project fencing to allow occupant access to the completed housing units.

1.3.2 Prototype Housing Units

After Contract award, prototype family housing units of each **(AM#20 building** type design (2-br unit, 3-br unit, and ADA unit) shall be constructed to demonstrate construction details and quality of construction. Each stage of work shall be completed and accepted on the prototype housing unit prior to starting work on the same stage for similar housing units. The prototype family units will be used to verify the details of the accepted design and material selections and to establish the standards of construction and workmanship against which the remaining project will be judged. Work on each successive stage of the prototype housing unit may begin immediately after the acceptance of the preceding stage. However, a representative sample of the work on one prototype unit for each stage of construction shall be retained for examination with the prototype housing unit (i.e. not worked over, covered, or concealed in any way) until completion of that stage of the work throughout the project unless otherwise authorized by the Contracting Officer. As a minimum, the stages of the work in each prototype housing unit that will be subject to acceptance by the Contracting Officer include the following:

Concrete Work
Rough framing (roofs, floors, ceiling, and exterior and interior walls).
Plumbing, mechanical, electrical rough-in
Insulation (walls, ceilings, and roofs)
Gypsum wallboard installation
Gypsum wallboard finishing
Doors
Windows
Hardware
Infiltration compliance
Installation and operation of fixtures and equipment (plumbing, mechanical, and electrical)
Finish carpentry and cabinetry
Interior finishes and trim
(AM#2) Exterior finishes and trim
(AM#2) Roofing System

Prototype housing units shall be completed to finished status upon construction and acceptance of all other housing units.

1.3.3 Superintendence Of Subcontractors

a. The Contractor shall be required to furnish the following, in addition to the superintendence required by the Contract Clause entitled "SUPERINTENDENCE BY CONTRACTOR":

(1) If more than 50% and less than 70% of the value of the contract work is subcontracted, one superintendent shall be provided at the site and on the Contractor's payroll to be responsible for coordinating, directing, inspecting and expediting the subcontract work.

(2) If 70% or more of the value of the work is subcontracted, the Contractor shall be required to furnish two such superintendents to be responsible for coordinating, directing, inspecting and expediting the subcontract work.

b. If the Contracting Officer, at any time after 50% of the subcontracted work has been completed, finds that satisfactory progress is being made, he

may waive all or part of the above requirement for additional superintendence subject to the right of the Contracting Officer to reinstate such requirement if at any time during the progress of the remaining work he finds that satisfactory progress is not being made.

1.4 WORK RESTRICTIONS

1.4.1 Existing Housing

Work is adjacent to existing housing units. Utilities and roads to existing housing units shall remain operational throughout the Contract.

1.4.2 Working Hours

Working hours are specified in Section 01363 SPECIAL PROJECT PROCEDURES FOR DYESS AIR FORCE BASE.

1.4.3 Security Requirements

For the duration of this Contract, access to the Installation may be delayed between 30 minutes to an hour or more due to security precautions, including the checking of vehicle occupants' IDs, vehicle manifests, and the searching of all vehicles. Any general or specific threat to the safety of those working or living at Dyess AFB could result in longer waiting times at the access points to Dyess AFB.

1.5 UTILITIES

1.5.1 Payment for Utility Services

In accordance with Contract Clause 52.236.14 AVAILABILITY AND USE OF UTILITY SERVICES, water, gas, and electricity are available from Government-owned and operated systems and will be furnished without charge to the Contractor as specified in Section 01363 SPECIAL PROJECT PROCEDURES FOR DYESS AIR FORCE BASE.

1.5.2 Outages

(AM#2) See Section 01363 SPECIAL PROJECT PROCEDURES FOR DYESS AIR FORCE BASE.

1.6 STREET CLOSINGS

Street closing procedures shall be in accordance with Section 01363 SPECIAL PROJECT PROCEDURES FOR DYESS AIR FORCE BASE.T

1.7 CONTRACTOR VERIFICATION OF CONTRACT SURVEY DATA

During initial site layout and before existing conditions are disturbed the Contractor shall verify, in writing, the basic survey data provided on the contract drawings. Verification shall be initiated from the point shown on the contract drawings or from the contract drawing reference point designated by the Contracting Officer's Authorized Representative and shall include, as a minimum, benchmark elevations, horizontal control points, and sufficient spot checks of critical elevations to ensure that the survey data adequately reflects existing conditions. The Contractor shall not proceed with construction until survey verification is provided to the Contracting Officer's Authorized Representative. Before an existing benchmark referenced on the contract drawings is disturbed the Contractor shall establish a new benchmark which has been approved by the Contracting

Officer's Authorized Representative. Benchmarks which are destroyed without authorization from the Contracting Officer's Authorized Representative must be replaced at the Contractor's expense as prescribed in Section 00700 Contract Clause, "Layout of Work." The Contractor shall refer to Contract Clauses, "Differing Site Conditions" and "Site Investigation and Conditions Affecting the Work," for additional requirements.

1.8 **(AM#3) SEQUENCE OF DESIGN/CONSTRUCTION (FAST TRACK)**

(a) After receipt of the Contract Notice to Proceed (NTP) the Contractor shall initiate design, comply with all design submission requirements as covered under Division 01 General Requirements, and obtain Government review of each submission. The Contractor may begin construction on portions of the work for which the Government has reviewed the final design submission and has determined satisfactory for purposes of beginning construction. The Contracting Officer will notify the Contractor when the design is cleared for construction. The Government will not grant any time extension for any design resubmittal required when, in the opinion of the Contracting Officer, the initial submission failed to meet the minimum quality requirements as set forth in the Contract.

(b) If the Government allows the Contractor to proceed with limited construction based on pending minor revisions to the reviewed Final Design submission, no payment will be made for any in-place construction related to the pending revisions until they are completed, resubmitted and are satisfactory to the Government.

(c) No payment will be made for any in-place construction until all required submitttals have been made, reviewed and are satisfactory to the Government.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

-- End of Section --

SECTION 01012

SUBMITTALS DURING DESIGN
04/02
AMENDMENT NO. 0001, 0002, 0003, 0006 and 0007

PART 1 GENERAL

1.1 SUMMARY

1.1.1 SECTION INCLUDES

This section includes general requirements for developing and submitting a design including preparation of drawings, specifications and design calculations conforming to the requirements contained in this section.

1.1.2 SECTION EXCLUDES

This section does not include requirements for construction submittals, which are specified in Section 01330 CONSTRUCTION SUBMITTAL PROCEDURE."

1.2 DESIGN COMPLETION SCHEDULE

See paragraph COMMENCEMENT, PROSECUTION, AND COMPLETION OF WORK in Section 01001 DESIGN AND CONSTRUCTION SCHEDULE for the Completion Schedule of the entire work.

1.3 REFERENCES

The publications listed below form a part of this specification to the extent referenced in the Contract. The publications are referred to in the text by basic designation only.

THE CONSTRUCTION SPECIFICATIONS INSTITUTE (CSI)

CSI Masterformat	(1995) MasterFormat

U.S. DEPARTMENT OF DEFENSE

MIL-HDBK-1008C	(10 June 1997) Fire Protection For Facilities Engineering, Design and Construction

INTERNATIONAL CODE COUNCIL (ICC)

ICC Building Code	(2000) ICC International Building Code
ICC Plumbing Code	(2000) ICC International Plumbing Code (IPA)
ICC Mechanical Code	(2000) ICC International Mechanical Code
ICC Fire Code	(2000) ICC International Fire Code
ICC Fuel Gas Code	(2000) ICC International Fuel Gas Code

(AM#3) INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS (IAPMO)

IAPMO-01	**(2000 Edition) The Uniform Plumbing Code**

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 1	(February 5,2001) Fire Prevention Code
NFPA 54 (AM#3)	**(1999) National Fuel Gas Code**
NFPA 70	(2002) National Electrical Code
NFPA 101	(2000) Life Safety Code

(AM#2) TEXAS STATE DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION STANDARD SPECIFICATIONS (TSDHPT)

TSDHPT-01	**(Current Edition) Standard Specifications for Construction of Highways, Streets and Bridges**

US ARMY CORPS OF ENGINEERS, SOUTHWESTERN DIVISION (SWD)

SWD-AEIM	(October, 2000) Architectural and Engineering Instructions Manual (SWD-AEIM)

1.4 SUBMITTALS

SD-05 Design Data

Design Certification and Transmittal Letter; G.

See DESIGN CERTIFICATION paragraph. Form is attached at the end of this Section.

1.5 **(AM#1) ENGLISH REQUIREMENTS**

(AM#2) This is an English dimensioned project.

1.5.1 **(AM#1) Not Used**

1.5.2 **(AM#1) Not Used**

1.5.3 **(AM#1) Not Used**

1.5.4 **(AM#1) Not Used**

1.5.5 **(AM#1) Not Used**

1.6 DEFINITIONS

1.6.1 Acceptance

This is the Government's review of the design submittals, construction submittals, and record drawings for conformance to the Contract requirements. Acceptance shall not be construed to be an endorsement of the accuracy or completeness of the design. The Contractor is ultimately responsible for the contract design and construction. Design deficiencies or omissions in the accepted design shall be the responsibility of the Contractor and the Designer of Record.

1.6.2 Approve, Approved, and Approval

As these words are used throughout the documents, they shall mean "as

approved by the Designer of Record unless otherwise expressly stated." See Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES.

1.6.3 Complete Specification Section

A Complete Specification Section is one that follows the Construction Specifications Institute's (CSI) 16-Division, 3-Part Section format, including the required submittal register and testing requirements.

1.6.4 Contractor

Firm or company to whom award is made to design and construct the project.

1.6.5 Contract Documents

Contract Documents, in addition to the signed Contract Form and the Contract Clauses, include the Request for Proposal, all amendments, the Contractor's proposal as accepted at the time of contract award, and the Contractor approved, Government accepted 100% final construction documents.

1.6.6 Construction Documents

Documents provided by the Contractor and accepted by the Government for use in constructing the project, including but not limited to final design drawings and specifications, schedules, submittal registers, and color boards.

1.6.7 Corps of Engineers Unified Facilities Guide Specifications (UFGS)

Includes the Corps of Engineers Unified Facilities Guide Specifications (UFGS) for Military Construction, the narrow-scope sections developed by the Fort Worth District (UFSWF GS), and the Fort Worth District Supplements to the UFGS.

1.6.8 Design Documents

Documents which include design drawings, project specifications, and design analyses (basis of design and calculations) prepared by or under the direct supervision of registered professional architects and engineers and proposed by the Contractor to meet the requirements of this Contract.

1.6.9 Design Drawings

Documentation showing in graphic and quantitative form the extent, design, location, relationships, and dimensions of the construction to be provided by the Contractor. (Note: Shop Drawings, as defined in Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES, are not to be provided until after design drawings are accepted for construction.)

1.6.10 Designer

Architects and Engineers (A/E) associated with the Contractor who are responsible for the design and have the qualifications and experience specified.

1.6.11 Designer of Record

The Contractor's Architect/Engineer (A/E) is the "Designer of Record" and officially approves the design submittals, construction submittals, and

record drawings. There shall be a designer of record for each design discipline. The designer of record is solely liable for design errors and/or omissions and shall have professional liability insurance to insure the designer against design errors and omissions. The Contractor's Construction Quality Control Staff will check and certify all construction submittals. See paragraph DESIGNER(S) OF RECORD for additional requirements.

1.6.12 Mandatory Guides

Mandatory Guides are those guides included in Divisions 2 through 16 of the Contract as unedited or partially edited guides and which shall be included in the Contractor's construction specifications. Some of the guides may be partially edited while others may not be edited at all. The Contractor shall edit or finish editing these guides.

1.6.13 Mandatory Sections

Mandatory Sections are those sections included in Divisions 2 through 16 of the RFP which have been completely edited and shall be included in the Contractor's construction specifications verbatim.

1.6.14 Solicitation or Request for Proposal (RFP)

Documents furnished to prospective offerors containing proposal information and specifying criteria and project requirements for design and construction of the project. The documents include this specification, attachments, and the information drawings.

1.6.15 Construction Specifications

Construction specifications are the Contractor's developed construction specifications consisting of the Government-furnished Division 1 (General Requirements) sections and the Contractor-written sections in Divisions 2 through 16 which will be used to construct the project. Divisions 2 through 16 shall include any the Contract mandatory specifications

1.6.16 Design Development (60 Percent Design) Submittal

Design Development (60 Percent Preliminary Design) Submittal shall mean 60 percent building, including foundations, and 100 percent site work and utilities (including utilities within the 1.5m line of the housing units). See paragraph DESIGN SUBMITTALS for further clarification.

1.7 QUALITY ASSURANCE

1.7.1 DESIGN AND CONSTRUCTION PERSONNEL QUALIFICATIONS

Design and Construction Personnel experience shall be as submitted in accordance with the requirements of Section 00110 PROPOSAL SUBMISSION AND EVALUATION. If, because of reasons beyond the control of the Contractor, the named individuals are not able to fulfill their obligations, replacement personnel with similar skills and experience shall be presented for acceptance by the Contracting Officer. The Contractor shall obtain the Contracting Officer's written consent before making substitutions for designated personnel.

1.7.1.1 Project Manager

The project manager shall have a recognized four-year or higher college degree in architecture, engineering (or related technical fields), or construction management and have at least 5 years experience in managing design and construction projects or 10 years experience in managing construction projects only. Experience shall be related to housing projects similar in size and scope of this Contract. The Project Manager may be the lead designer.

1.7.1.2 Designers

Provide at least one professional licensed architects or engineers for each of the design disciplines (landscape, architectural, civil, structural, mechanical, and electrical) who have at least 5 years experience in their discipline. Each lead designer shall have a recognized four-year (or higher) college degree in architecture or engineering and 3 years experience as a lead designer. The architect shall be proficient with sustainable design or LEED Green Building Rating Systems and its building practices, technologies, policies, and standards as developed by the U.S. Green Building Council. The field work, analysis, and design of the cathodic protection system shall be accomplished by or under direct supervision of an engineer licensed in corrosion engineering or a corrosion specialist certified by the National Association of Corrosion Engineers (NACE). The corrosion engineer or corrosion specialist shall have a minimum of five years experience in designing and installing cathodic protection systems.

1.7.1.3 Surveyor

The Surveyor should be licensed in the State of Texas and have at least 5 years experience in the field of surveying.

1.7.1.4 Geologist/Geotechnical Engineer

The Geologist/Geotechnical Engineer should be a licensed geologist or registered professional engineer and have at least 5 years experience in soil borings and soil classification.

1.7.1.5 Early Childhood Play Specialist

The early childhood play specialist shall have a recognized four-year college degree in early childhood education or related technical fields, and have at least 5 years experience in the design of play areas.

1.7.1.6 Design Quality Control Manager

Design quality control manager and the alternate manager qualifications are specified in Section 01430 DESIGN QUALITY CONTROL. Design quality control manager shall not be the same person as the construction quality control manager.

1.7.1.7 Construction Quality Control Manager

Construction quality control manager and assistants qualifications are specified in Section 01451 CONSTRUCTION QUALITY CONTROL. Construction quality control manager shall not be the same person as the design quality control manager.

1.7.1.8 Project Superintendent

The Project Superintendent should be a graduate engineer or experienced construction person and have at least 5 years experience in related work on housing projects similar to this project. See Section 01451 CONTRACTOR QUALITY CONTROL for additional requirements.

1.7.1.9 Project Schedule Scheduler

Qualifications for the Scheduler are specified in Section 01320 PROJECT SCHEDULE.

1.7.1.10 CADD Personnel

CADD personnel shall be proficient in the preparation of architectural and engineering drawings and the CADD equipment that will be used to create the required drawings and record drawings. The lead CADD person shall have at least 5 years experience on the proposed equipment.

1.7.1.11 Industrial Hygienist

Industrial Hygienist (IH), or Designated Industrial Hygienist, shall be a professional qualified by education, training, and experience to anticipate, recognize, evaluate, and develop controls for occupational health hazards.

The Designated IH shall be board certified in the practice of industrial hygiene as determined and documented by the American Board of Industrial Hygiene (ABIH), have EPA Model Accreditation Plan (MAP) "Contractor/Supervisor" training accreditation required by 40 CFR 763, Subpart E, Appendix C, and have a minimum of 5 years of comprehensive experience in planning and overseeing abatement activities for asbestos, lead, regulated materials, and mold. Provide copies of the Designated IH's current valid ABIH certification, "Contractor/Supervisor" course completion certificate(s), the most recent certificate(s) for required refresher training, and the employee "Certificate of Worker Acknowledgment" as required in Section 13280 ASBESTOS ABATEMENT. The Designated IH shall be completely independent from the Contractor according to federal, state, or local regulations; that is, shall not be a Contractor's employee or be an employee or principal of a firm in a business relationship with the Contractor negating such independent status.

1.7.2 CONSTRUCTION MANAGEMENT KEY PERSONNEL

The Contractor's construction management key personnel shall be actively involved during the design process to effectively integrate the design and construction requirements of this Contract. In addition to the typical required construction activities, the Contractor's involvement shall include, but is not limited to, actions such as integrating the design schedule into the Master Schedule to maximize the effectiveness of fast-tracking design and construction (within the limits allowed in the Contract), ensuring constructability and economy of the design, integrating the material and equipment acquisition programs to meet critical schedules, effectively interfacing the construction QC program with the design QC program, and maintaining and providing the design team with accurate, up-to-date redline and as-built documentation. The Contractor shall require and manage the active involvement of key trade subcontractors in the above activities. The Contractor's Quality Control Staff will check and certify all submittals.

1.7.3 DESIGNER(S)OF RECORD

The Contractor shall identify, for approval, the Designer of Record for each area of work. One Designer of Record may be responsible for more than one area. All areas of design disciplines shall be accounted for by a listed, registered Designer of Record. The Designer(s) of Record shall stamp, sign, and date all design and construction drawings under their responsible discipline at each design submittal stage, including modification drawings after start of construction (See Section 00700, CONTRACT CLAUSES, Clause 52.236-25 entitled "Requirements for Registration of Designers").

1.7.4 CODES

Make all portions of the project comply with all applicable local, State, and federal regulations, including those listed below:

a. In the event of conflict or inconsistency between any of the provisions of the various codes, standards, or references, precedence shall be given in the following order:
1) Contract requirements
a) The code, standard, or reference that is listed in the Contract design or performance requirement;
b) When conflict exists between references, the more stringent requirement shall govern;
c) Where a particular design aspect is not covered by any of the codes, standards, or references listed, nor by the requirements specified in the Contract, the Contractor shall be guided by other nationally recognized and accepted codes or standards which do apply;
d) The "authority having jurisdiction," or the role of the code official, as cided in codes, standards, or references, will be the Contracting Officer.
2) Installation Design Guide
3) Southwestern Division's Architectural and Engineering Instructions Manual (SWD-AEIM)
4) Technical and Engineering Manuals, Instructions, Letters, Design Guides, Engineer Regulations, Pamphlets, and Bulletins.

b. Federal Regulatory Requirements:
1) 29 CFR 1910-1997, Occupational Safety and Health Standards, and in particular 29 CFR 1910.1001, Appendix F, "Work Practices and Engineering Controls for Automotive Brake and Clutch Inspection, Disassembly and Assembly."
2) U.S. Environmental Protection Agency (EPA), National Pollution Discharge Elimination System (NPDES) Storm Water Construction Permit in accordance with Federal register, Volume 63, Number 128, July 6, 1998.

c. State of Texas regulatory requirements
1) Texas Natural Resource Conservation Commission (TNRCC)
a) Air emission in accordance with 30 Texas Administrative Code (TAC) 116.111 and 30 TAC 106
b) Underground and Aboveground Storage Tanks per 30 TAC 334
c) Erosion and sedimentation control regulations, see NPDES requirements above and Section 01421 OUTLINE OF A BASIC STORM WATER POLLUTION PREVENTION PLAN, Volume III SPECIFICATIONS.

d. Non-Regulatory Criteria Documents:

1) NFPA 1, Fire Prevention Code
1A) **NFPA 54 National Fuel Gas Code (AM#3)**
2) NFPA 70, National Electrical Code.
3) NFPA 101, Safety to Life From Fire in Buildings and Structures.
4) ICC International Fire Code
5) ICC International Building Code
6) **IAPMO-01 The Uniform Plumbing Code (AM#3)**
7) ICC International Mechanical Code
8) ICC International Fuel Gas Code
9) SWD Architectural and Engineering Instructions Manual (SWD-AEIM).
10) For Environmental Design, see Chapter XII ENVIRONMENTAL DESIGN of SWD-AEIM.
11) MIL-HDBK-1008C, Fire Protection For Facilities Engineering, Design and Construction
12) Army Regulation (AR) 200-1, Environmental Protection and Enhancement, February 1997.
(AM#2) Texas Standard Specifications for Construction of Highways, Streets and Bridges (TSDHPT-01 Current Edition)

1.8 SUBMISSION OF CONSTRUCTION DRAWINGS, SPECIFICATIONS, AND DESIGN ANALYSES

1.8.1 DESIGN CERTIFICATION

With each submittal the Contractor shall certify that all items submitted in the design documents (after contract award) comply with the Contract requirements. The criteria specified in this Contract are binding contract criteria and in case of any conflict, after award, between the Contract criteria and Contractor's submittals, the criteria stated in the Document Order of Precedence in Section 00800 SPECIAL CONTRACT REQUIREMENTS will govern. The Contractor shall present with the letter of transmittal for each design submittal (including the 100 percent corrected design (compliance check) submittal) a certification that the submittal (drawings, specifications, design analysis, etc.) complies with the requirements stated above. Prepare the design certification and transmittal letter in the format shown on Attachment A attached at the end of this Section.

1.8.2 DEVIATIONS

Deviations from the Contract requirements shall be identified in each design submittal's letter of transmittal. These deviations will be considered for approval by the Contracting Officer if the changes result in significant improvements to the project or they exceed the minimum Contract requirements. The Contracting Officer may reject any deviation proposed by the Contractor without explanation.

1.8.3 FIELD INSPECTION

The Contractor shall verify field conditions which are significant to design by field inspection, researching and reviewing the existing documents pertaining to the site and existing building(s), and evaluating observable existing conditions. The information shall be reflected in the design documents. It is the responsibility of the Contractor to evaluate existing conditions in the immediate proximity of the project to determine if such conditions may affect, or be affected by the proposed construction. If there are site conditions which appear to affect the proposed construction the Contractor shall inform the Contracting Officer, in writing, before proceeding with the work.

1.8.4 NUMBER OF COPIES

The number of copies for distribution is specified in paragraph "Review Document Distribution." For each design submittal, submit for review and acceptance the specified number of copies of the construction drawings, specifications, design analyses, equipment schedules, submittal register, and all other submittal data, which shall be in accordance with the requirements of the Contract Documents. Upon final acceptance, make distribution of the accepted design and construction documents within 7 calendar days. **(AM#2) For each agency or individual on the Distribution List**, provide one CD-ROM disk (or more if required) containing all documents. The CD-ROM disks shall be fixated "Final," which is a recording option that renders the disk totally used so that no other data tracks can be added in a later recording session. Proposed modifications shall be submitted in 8 copies. Final modifications, after negotiations, shall be submitted in 8 copies (including one reproducible).

1.8.5 FINAL CONSTRUCTION DOCUMENTS

Each distributed set shall consist of full-size paper drawings, specifications, submittal register, design analysis, and a CD-ROM disk(s) containing all of the final design documents (e.g. drawings, specifications, submittal register, and design analysis files). Provide documents complete, accurate, and explicit enough to show compliance with the Contract requirements and to permit construction. Drawings and specifications illustrating systems proposed to meet the requirements of the Contract shall reflect proper detailing for each such system to assure appropriate use, proper fit, compatibility of components and coordination with the specifications and design analysis required by this section. Coordinate drawings to ensure there are no conflicts between design disciplines and between drawings and specifications. See additional requirements in PART 3 EXECUTION. During and upon completion of the project, the accepted design documents shall be corrected to reflect as-built conditions in accordance with Section 01780 CLOSEOUT SUBMITTALS.

1.8.5.1 Final Construction Drawings

In addition to the required number of hard copies of final design documents (e.g. drawings, specifications, submittal register, and design analysis), construction document (100 percent final design) drawings, and record (i.e. as-built) drawings after the completion of the project shall be submitted on CD-ROM disk in the CADD format required by the Contract. Furnish four CD-ROM disks, one each for the Area Office, Corps of Engineers' District Office, Corps of Engineers' Dyess Resident Office, and and the User. On the CD-ROM disk include the electronic .dgn or .dwg CADD drawing files, the CADD drawing files in .CAL format (CADD files converted to .CAL) for viewing on MaxView **(AM#2) and SourceView Readers**, and an Excel spreadsheet listing for each drawing the drawing number, sequence number, level/layer assignments, line colors, line weights, and line types. See additional requirements in PART 3 EXECUTION.

1.8.5.2 Computer Aided Design and Drafting (CADD) Systems

Within 10 days of Contract Notice to Proceed, furnish for approval samples of CADD electronic files created on the equipment and software to be used for this work. CADD work will not proceed until the Contractor's proposed CADD system and resulting CADD files have been acceptably demonstrated to work on the Corps of Engineers' Fort Worth District Office and the User's CADD systems.

1.8.5.3 Specifications and Design Analysis

Specifications and design analysis shall be provided in hard copy and on the same CD-ROM disk as the drawings, Microsoft Word for Windows format (Version Word 2000, but shall be compatible with the version used at Dyess Air Force Base). The Division 1 sections included in the Contract shall be reprinted in the final 100 percent construction specifications. Hard copies of the specifications and design analyses shall be bound separately in 3-ring binders. Each set of documents shall have its own Table of Contents. See additional requirements in PART 3 EXECUTION.

1.8.5.4 Final Document CD's

All Automated Computer Aided Design (ACAD) files, Technical Specification Files, and Design Analysis files shall be remitted to the Government on 12 CM (5") Single Sided CD ROM disks, which stores 680MB and can be read with 3000 KB/S-20X (Read Only) Drive. Minimum required disk life is 30 years. All files, whether CADD or those created by a Windows based word processor, spread sheet, or database program respectively, shall be provided in their original uncompressed format.

1.8.6 DESIGN DOCUMENTS

Design documents shall include construction drawings, specifications, submittal register, design analysis, and drafts of DD Form 1354. Detailing and installation of all equipment and materials shall comply with the manufacturers' recommendations. Construction drawings and specifications shall not make reference to RFP requirements. The Contractor, including designers, shall visit the site and make other trips as necessary during the design to accomplish the work. **(AM#2)** **(Deleted Sentence) .**

1.8.6.1 Drawings

See paragraph SUBMISSION OF CONSTRUCTION DRAWINGS, SPECIFICATIONS AND DESIGN ANALYSES, subparagraph "FINAL CONSTRUCTION DOCUMENTS."

1.8.6.2 Specifications

Specifications shall be in sufficient detail to fully describe and demonstrate the quality of materials, the installation and performance of equipment, and the quality of workmanship. Specifications shall conform to the Construction Specifications Institute (CSI) 16-Division 3-Part format and follow the CSI's section numbering system defined in CSI MasterFormat. No two sections shall have the same section number. Division 1 specifications shall consist of the Division 1 sections included in the Contract. The specifications shall clearly identify the specific products chosen to meet the requirements of the Contract (manufacturers' brand names and model numbers or similar product information). Turfing sections shall indicate planting dates.

1.8.6.3 Design Analysis

Describe the design of each discipline of work, including all features and the necessary calculations, tables, methods, and sources used in determining equipment and material sizes and capacities. Provide sufficient information to support the design of the various categories such as, but not limited to, architectural, interior design, structural, mechanical, electrical, civil including grading, drainage, paving,

environmental, and outside utility services, and Contract included items.

1.8.6.4 Sustainable Project Rating Tool (SPiRiT)

In addition to other requirements, provide environmentally responsible design and construction that minimizes adverse effects on the exterior environment, enhances the quality of the indoor environment, and minimizes consumption of energy, water, construction materials, and other resources. See Section 01000 STATEMENT OF WORK, Chapter 3 SUSTAINABLE DESIGN CONSIDERATIONS for additional information.

a. **(AM#2) Document design sustainability utilizing the** Sustainable Project Rating Tool (SPiRiT) which is derived from The U.S. Green Building Council LEED 2.0 (Leadership in Energy and Environmental Design) Green Building Rating System **(AM#2)** _____. The Sustainable Project Rating Tool (SPiRiT) is included in the Appendices and can also be viewed at the following web site:
http://www.cecer.army.mil/Sustdesign/SPiRiT.cfm

1.8.6.5 DD Form 1354

The 1354 process consists of preliminary and final drafts of the DD Form 1354, TRANSFER AND ACCEPTANCE OF MILITARY REAL PROPERTY, and a Final DD Form 1354. DD Form 1354 is required so that Dyess Air Force Base can update their real property maintenance records. Submit the preliminary drafts with each of the design submittals and a final draft within 30 days of the Government's acceptance of the 100% construction documents. These drafts shall contain as many of the resource code items with cost and quantity data as can be developed from the Contractor's submittal documents. The Government will use the final DD Form 1354 draft to develop the DD Form 1354 to be submitted to Dyess AFB. The form, a sample of a completed form, and a general list of resource codes with cost and quantity data are included in the ATTACHMENTS. An electronic file of the form, DD1354.frl, for use with Delrina Perform Pro Form Filler, version 16 Jul 1992, or its successor software Form Flow Filler, Version 2.22 (March 5, 1999)is located on the Solicitation and Contract CD-ROM disks.

1.8.7 DESIGN SUBMITTALS

1.8.7.1 General

The Contractor shall schedule the number and date of the design submittal phases and conferences. Design submittals are required at the design development (preliminary 60 percent), construction drawing (final 100 percent design) stages, and at the corrected construction drawing (final design) stage. The number, date, and contents of the design submittal phases shall be reflected in the project schedules. An authorization letter to start work will be provided separately by the Contracting Officer for each phase of the design. See paragraph "Government Design Review and Acceptance". See additional requirements in PART 3 EXECUTION..

1.8.7.2 Design Development (60 Percent Design) Submittal

The 60 percent design submittal includes the 60 percent in-progress building design and the 100 percent complete site work and exterior utilities. **(AM#3) Offerors are encouraged to submit design data for sitework at the earliest stage feasible and may submit sitework design exclusive of building design data. A separate staking plan may be desireable to proceed with construction as early as feasible.** These

documents shall be packaged and stamped "For Review Only - Design Development (60% Design)". Each sheet of the drawings shall also be stamped except sitework and exterior utilities which will be stamped "Construction Documents (100% design)". See additional requirements in PART 3 EXECUTION.

1.8.7.3 Construction Documents (100 Percent Design) Submittal

The 100 percent design submittal includes complete site and utility design and building design and shall be stamped "For Review Only -Construction Documents (100% Design)", and each sheet of the drawings shall also be stamped. Contractor shall make final proposal of all materials and finishes at this stage.

1.8.7.4 Compliance Check Design Submittal

The compliance check design submittal(s) after the Government review of the 100 percent complete site and building designs shall be stamped "Construction Documents (100% Corrected Design)"; and each sheet of the drawings shall also be stamped and signed by the Designer of Record.

1.8.7.5 Insufficient Design Submittals and Delays

No additional time for completion of the contract will be granted to the Contractor due to insufficient design submittals. Delays caused by the Contractor in completion of the Design Development (60 percent design), Construction Documents (100 percent design), or the 100 percent corrected design will not be considered as valid reason to delay the entire project within the specified project duration.

1.8.7.6 Deviations or Betterments

The Contractor shall bring to the Government's attention any deviations or betterments made to the RFP and Contractor's proposal documents. These shall be summarized in letter form with reasons and highlighted or clouded details on the applicable drawings and documents submitted. See Section 00800 SPECIAL CONTRACT REQUIREMENTS for additional requirements concerning betterments.

1.8.7.7 Review Design Documents

The Contractor shall submit all drawing design documents on black-line media with "FOR REVIEW" stamped in 12.5 mm high letters in the lower right corner in red ink. Specifications and Design Analyses shall be hard copy with "FOR REVIEW" stamped in 12.5 mm (1/2-inch) high letters in the lower right corner in red ink. The Contractor shall submit Contractor-approved documents on black-line media with "APPROVED FOR CONSTRUCTION" similarly stamped.

1.8.8 DESIGN REVIEWS

Design reviews will be held at Base Civil Engineer Office, Dyess Air Force Base, at the Design Development (preliminary 60 percent), Construction Documents (final 100 percent), and corrected final stages of the final design in accordance with the Contractor's Project Schedule. The Government shall have thirty (30) calendar days review period for each submittal (Design Development (60 percent design) and Construction Documents (100 percent Design)) and fourteen (14) calendar days review period for resubmittal of the 100 percent Design (including the 100% final

site workand utilities, and foundation portion of the 60% Submittal and the Compliance Check Design) after incorporation of final review comments. Additional design review conference(s) between the Contractor and the Government may be held after submittal of the Design Development (60 percent) or the Construction Documents (100 percent) design(s) if the Government determines them necessary. The time for Government review will be calculated from the date of receipt of the design submittals at the Government address to the date annotated conformance review comments are mailed to the Contractor.

1.8.8.1 Review Intent

Reviews will be for conformance with the technical requirements of the Contract. If the Contractor disagrees technically with any comment and does not intend to comply with the comment, the Contractor shall clearly outline, with ample justification, the reasons for noncompliance within 5 days after receipt of these comments in order that the comment(s) can be resolved. The Contractor shall furnish disposition of all comments, in writing, with the next scheduled submittal. If the Contractor believes the action required by any comment exceeds the requirements of the Contract, the Contractor shall immediately notify the Contracting Officer in writing and take no action regarding this matter until the matter is resolved.

1.8.8.2 **(AM#3) DELETED**

1.8.8.3 Review Document Distribution

For each review, review documents shall be sent, in the quantity indicated, to the addresses listed below. The documents will be in their then present "on-board" design status. All documents must contain an index of contents. Work shall, however, continue up to the time of the review conference date(s) when 2 copies of then-current design documents will be brought to the issuing office for the conference review. Originals of transmittal letters shall be sent to the Area Engineer, address as shown below, and copies should accompany each mail package. Transmittal letters shall indicate distribution by use of the "ATTN" code shown in the address.

No. of Copies

(**8***- Review) District Engineer
(2- Final) US Army Engineer District, Fort Worth
ATTN: CESWF-EC-AM (Mr. Wayne McDonald))
P.O. Box 17300
Fort Worth, TX 76102-0300
817-886-1893
wayne.mcdonald@swf02.usace.army.mil
<mailto:wayne.mcdonald@swf02.usace.army.mil>

***If sitework submittals are submitted without building design data, furnish only 2 copies to CESWF-EC-AM. (AM#3)**

(7- Review) 7 CES/CECN
(3- Final) ATTN: John Ford
710 Third Street
Dyess AFB TX 79607-1670
915-696-5618
John.ford@dyess.af.mil <mailto:John.ford@dyess.af.mil>

(8- Review) HQ ACC/CECW
(3- Final) ATTN: Conrad Browe, Room 326
129 Andrews Street, Suite 102**(AM#6), Room 315**
Langley AFB, VA 23665-2769
(AM#6) 757-764-3680 or DSN 574-3680
Conrad.Browe@Langley.af.mil
<mailto:Conrad.Browe@Langley.af.mil>

(2- Review) Central Texas Area Office
(2- Final) ATTN: CESWF-AO-C (Mr. Atlan Citzler)
4622 Engineer Drive @ 79th Street
Fort Hood, TX 76544
(P.O. Box 757
Killen, TX 76540-0757)
254-532-3047; ext 5401

(2- Review) US Army Corps of Engineers
(2- Final) Dyess Project Office
ATTN: CESWF-PO-D (Kenneth Atchison)
818 3rd Street
(P.O. Box 9605)
Dyess Air Force Base, TX 79607-9605
915-692-8601
Ken.t.Atchison@swf02.usace.army.mil
<mailto:Ken.t.Atchison@swf02.usace.army.mil>

1.8.8.4 Additional Review Time

If for any reason the Government requires more time than that stated for review, then the Contractor will be granted an extension of time equal to the number of calendar days of delay.

1.8.8.5 Government Design Review and Acceptance

Government personnel will present review comments for discussion and resolution. Copies of comments, annotated by the Designer of Record with **(AM#3) preliminary corrective action indicated,** will be made available to all parties at least **(AM#2) 5 calendar days** prior to the conference. Review conferences will be scheduled by the Contractor. Unresolved problems will be resolved by immediate follow-on action at the end of conferences. Valid comments will be incorporated into the Documents. **(AM#7) Within (AM#2) ten days of review conferences, the Contractor shall distribute copies of annotated comments to all agencies on the Distribution List in the same quantity as design documents required for the corresponding submittal.** On receipt of final corrected design documents (with all backcheck comments incorporated) that are acceptable, the Contracting Officer shall notify the Contractor in writing that the documents are accepted and construction may begin. Furnish the final design and construction documents in accordance with paragraph "Number of Copies." The Government, however, reserves the right to not accept design document submittals if outstanding unincorporated comments are of too great a significance. In this case, every effort shall be made during follow-up action between the Contractor and the Fort Worth District to resolve conflicts and problems such that documents can be accepted. However, if final submittal(s) are incomplete or deficient, requiring correction by the Contractor and resubmittal for review, the cost of rehandling and reviewing will be deducted from payment due the Contractor at the rate of $500.00 per submittal.

1.8.9 FINAL CONSTRUCTION DOCUMENTS

Following the last submittal, the Contractor shall forward the completed original set of reproducibles for acceptance. Upon Government acceptance of corrected 100 percent final design documents, the original will be returned to the Contractor for reproduction purposes. The Contractor shall be responsible for reproduction. Within 7 calendar days after acceptance, the Contractor shall mail 1 complete set of the accepted design documents to the Fort Worth District, CESWF-EC-AM Attn: Wayne McDonald, and 5 complete sets to the Corps of Engineers' Area Engineer, Central Texas Area Office, Dyess Project Office. Each set shall consist of full size paper drawings, specifications, design analysis, and CD-ROM disk(s) containing the Contract Award CD files (contract, proposal, contract viewer, etc.) and all construction drawings, specifications, submittal register, and design analysis files). Arrange the construction document files in a Construction Documents folder with subfolders for drawings, specifications, design analysis, submittal register, etc. Modify the "aYYr00NN.con" file so that the drawings' .cal files can be viewed through the Contract Viewer. During and upon completion of the project, the accepted construction documents shall be corrected to reflect as-built conditions in accordance with Section 01780 CLOSEOUT SUBMITTALS. After acceptance, changes to the final construction documents shall not be made without the Contracting Officer's knowledge and acceptance.

1.8.10 COORDINATION

1.8.10.1 Written Records

The Contractor shall prepare a written record of each design site visit, meeting, or conference, either telephonic or personal, and furnish copies to the Contracting Officer and all parties involved within 5 working days. Include subject, names of participants, outline of discussion, and recommendation or conclusions. Number each written record for the particular project under design in consecutive order.

1.8.10.2 Design Needs List

Throughout the life of the Contract the Contractor shall furnish the Contracting Officer a biweekly "needs" list for design related items. This list shall itemize in an orderly fashion design data required by the Contractor to advance the design in a timely manner. Each list shall include a sequence number, description of action item, and the name of the individual or agency responsible for satisfying the action item and remarks. Maintain the list on a continuous basis with satisfied action items checked off and new action items added as required. Once a request for information is initiated, that item shall remain on the list until the requested information has been furnished or otherwise resolved. Mail copies of the lists to both the Contracting Officer and the agencies tasked with supplying the information.

1.8.11 REVISIONS TO THE ACCEPTED DESIGN

(a) The accepted design will be used by all parties involved in construction and in administration of the Contract. Therefore, it is imperative that the design documents be kept up to date and an effective system of making and distributing changes be implemented. Since changes to the design increase risk of construction errors and deplete available administrative resources, every effort shall be made to minimize revisions to the accepted design. One of the measures of the Contractor's

effectiveness of management will be how well the goal of minimizing changes to the accepted design is met. The use of effective quality control during design and utilization of experienced and capable designers are some of the means that are expected to be used to accomplish this goal.

(b) If revisions to the accepted design become necessary, the procedures described in Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES will be used to accomplish the revisions. The revisions will be considered a "Variation" and shall be submitted as a Government Review (Resident Engineer) submittal. All the requirements in paragraph: "Variations" in Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES will apply to revisions to the accepted design. All design analysis and calculations necessary to establish that the proposed revision satisfies applicable design requirements shall be included in the submittal.

PART 2 PRODUCTS

2.1 DESIGN DEVELOPMENT (60 PERCENT PRELIMINARY) DESIGN REQUIREMENTS

Preliminary design documents shall include all applicable plans, details, and specifications specified in the paragraph CONSTRUCTION DOCUMENTS (100 PERCENT PRELIMINARY) DESIGN REQUIREMENTS, drawn to 60 percent completion or more, unless otherwise indicated. Identify and resolve conflicts in the design requirements, between the design requirements and the Contractor's design proposal, or those due to lack of thorough understanding of the nature and scope of work prior to submittal of the 60 percent design. Drawings, design analysis, and specifications will be reviewed for compliance with the Contract design requirements at this design submittal. Submit the following:

2.1.1 **(AM#2) Deleted**

2.1.2 Drawings

Furnish all drawings that are required for the 100 percent submittal. Except for site work and exterior utilities all drawings shall be developed to approximately 60 percent completion. Site work and exterior utilities shall be 100 percent complete. The drawings shall be fully coordinated with the design analysis and specifications.

2.1.3 Specifications

Provide all specification sections required for 100 percent submittal. Specifications for site work and exterior utilities) shall be 100 percent complete. All other specifications required for the completion of the building(s), including turfing, and landscaping shall be at least mark-ups of the required technical and trade sections. Include the identification of the "author" of the industry guide specifications used, any mandatory guide specifications required in this Contract, and a project table of contents listing all sections to be included in the project.

2.1.4 Submittal Register

Prepare a Submittal Register as specified in Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES and paragraph CONSTRUCTION SPECIFICATIONS, subparagraph "Submittal Register," of this Section. Submittals for site work and utilities shall be 100 percent complete. Submittals for all other work shall be developed to the extent required to support the level of design included in this submittal. Submit a copy of the "Subreg" folder

with the updated files and program and four hard copies of the register with this design submittal.

2.1.5 Design Analysis

The design analysis shall give the basis for design for all disciplines and should establish specific goals, objectives, and priorities for the design of this project. Identify, explain, and document use of design criteria and how the design meets goals, objectives, and priorities. The design analysis shall comply with SWD-AEIM, Chapter IX, and include narrative description and analysis of all building systems, appropriate checklists, calculations, and catalog cut sheets of equipment used in the design.

2.1.6 **(AM#2) Deleted**

2.1.7 Sustainable Project Rating Tool (SPiRiT)

(AM#2) In accordance with the sustainable design requirements in PART 1 GENERAL's DESIGN DOCUMENTS' subparagraph "Sustainable Project Rating Tool (SPiRiT)", and using the Sustainable Project Rating Tool (SPiRiT), Version 1.4, provide a self-assessment of the achievement to-date of the sustainability features of the housing units (see Volume IV ATTACHMENTS for the Sustainable Project Rating Tool manual and rating sheets). For each element where you will meet (or exceed) the requirement, discuss how you will meet the stated requirement. Use the Microsoft Word version of then SPiRiT tool (SPiRiT v.1.4 Final.doc) for documentation, available on the Internet at http://www.cecer.army.mil/Sustdesign/SPiRiT.cfm, or use the version that is on the Solicitation Contract CD. Insert the documentations in the document immediately after the requirement text for each element.

2.1.8 Demolition

Provide the site clearing, demolition, and removal drawings of the site to receive the new housing, 100 percent complete, ready to start work.

a. Site Demolition Drawings (Removal Plan)

Show new work and removal work on separate drawings. The type and the scope of removal work intended shall be clear from an inspection of the documents. Keyed notes for removal are allowed.

The removal plan shall show the existing physical features and condition of the site before construction. Include the field survey to show all above and below ground utilities; buildings, drives, roads and parking areas, walks, and vegetation; and such facilities as retaining walls, underground storage tanks, foundations, existing contours, etc. Each physical feature to be removed shall be as indicated on the standard legend sheet, a legend on the removal plan, and properly noted: to be removed, to remain, or to be relocated.

b. Building Demolition Drawings (Removal Plan(s))

The type and the scope of removal work intended shall be clear from an inspection of the documents. Show the existing physical features and condition of the site before construction. Show all walls, fixtures, and utilities to be removed. Each physical feature to be removed shall be as indicated on the standard legend sheet, a legend on the removal plan, and properly noted: to be removed, to remain, or to be relocated.

2.1.9 Civil Design

The drawings shall be 100 percent complete, ready for start of construction. Drawings shall fully describe the type and the scope of work required. Include all necessary and required details, be thoroughly checked, and be fully coordinated with the Construction Specifications and all other Construction Documents.

2.1.10 Landscaping Design

Provide Landscaping Plan, including sprinkler system layout, and any details required for this level of design.

2.1.11 Architectural Design

60 percent architectural drawing submittal shall be a complete set of architectural drawings without large scale details. All other drawings shall be complete except referencing of the large scale details. Room finish schedule, and door, window, and louver schedules, shall all be complete except for references to details.

2.1.12 Interior Design

Provide SID Notebook(s) and design analysis.

2.1.13 Structural Design

Provide foundation plans and details. Provide details and notes for required structural work.Building structural members shall be at least outlined. Provide elevation views, sections, and details necessary to illustrate the design at a 60 percent level of completion. Roof framing plan(s) shall show sufficient details to clearly indicate the type of framing system used, size, and spacing of members and their elevations.

2.1.14 Mechanical Design

Provide plans, piping diagrams, sections, flow diagrams, details, schedules, and control diagrams/sequences as necessary to define the required design intent at this level of design. Floor plans shall use the architectural floor plans as a basis, with the building outline half-toned. Unless otherwise indicated, all floor plans shall be drawn at a minimum 1:100 (1/8-inch = 1'-0") scale and shall show room names and numbers. Provide preliminary mechanical room sections to ensure that major equipment items, piping, and ductwork will fit as designed. For the 60 percent submittal, all supply and return mains shall be shown as double-lined although branch ducts, takeoffs, and ductwork to diffusers may be single-lined. Piping 6 inches and larger shall be shown as double-lined for the 60 percent submittals.

Complete Attachment C for mechanical room sizing.

2.1.15 Electrical Design

Fully coordinate the 60 percent design drawings with the design analysis. Provide sufficient plans, single-line diagrams, riser diagrams, details, and schedules as necessary to define the required design intent for this level of design. Indicate all circuits, circuit breakers or fuse locations, panelboards, and PDUs known at this level of design.

2.1.16 Fire Protection Design

Provide the Life Safety Plan and the Fire Protection site and floor plans, complete. Fire protection details shall be sufficient for this level of design. Fire protection plans and details shall be approved by the fire protection engineer.

2.1.17 Environmental Design

Provide 60 percent completed document of the following item[s] for the 60 percent submittal:

a. Environmental Survey Sampling Plan for Existing housing demolition.

b. Basic Stormwater Pollution Prevention Plan

c. Storm Water Pollution Prevention Plan, Plans for Storm Water Controls, and Implementation of Pollution Prevention Plan

d. Design Analysis

2.2 CONSTRUCTION DOCUMENTS (100 PERCENT DESIGN) REQUIREMENTS

All drawings included in the required technical data for the proposal submission shall be developed to 100 percent completion. In addition to the individual utility plans, submit a combined utility plan drawn to the same scale as the individual utility plans. Furnish mechanical and electrical plans, with complete schematics, to show all air conditioning, plumbing, and electrical work. All design and calculations shall be performed by licensed professional engineers or architects. The following design documents shall be provided in the design submittals.

2.2.1 SITE/INFRASTRUCTURE

2.2.1.1 Environmental Protection Plan

Prepare and submit an Environmental Protection Plan in accordance with the requirements of Section 01355D ENVIRONMENTAL PROTECTION FOR DYESS AIR FORCE BASE. As an Appendix to the Environmental Protection Plan, the Contractor shall include copies of all environmental reports, permits, approvals, applications, and associated documents as an Appendix to the Environmental Protection Plans.

2.2.1.2 Location Plan and Vicinity Map

The Location Plan and Vicinity Map provided in the Request For Proposal (RFP) shall be updated as necessary and included in the drawings. The Location Plan shall include the Contractor's Access Route, Staging Area, stockpile areas, and the Project Site.

2.2.1.3 Removal Plan

The removal plan will show the existing physical features and condition of the site to receive the new housing before construction. Each physical feature to be removed shall be hatched as indicated on the standard legend sheet, a legend on the removal plan, and properly noted: to be removed, to remain, or to be relocated. The Removal Plan shall be prepared at the same drawing scale and use the sheet boundaries as the Site Plan.

2.2.1.4 Site Plan

The Site Plan shall show all the site layout information necessary to field locate the houses, street work, driveways, sidewalks, patios, privacy fence, security fence, recreation areas, and all other appurtenances to be constructed as part of the project. All major site work to be constructed will be dimensioned for size and location. The Site Plan will identify all site-related items such as: curbs, driveways, walks, retaining walls, mechanical units, electrical transformers locations, etc. in accordance with a standard legend sheet or with additional legends or notes. Drawing scales of 1:200 or 1:300 (1" = 30' or 1' = 40') are acceptable scales for the Site Plan. The Contractor shall consider the project's construction area, drawing legibility, number of sheets required in choosing the drawing scale. The Site Plan, prior to adding the dimensions and notes, should serve as the base sheet to other Plans, such as: Utilities Plan, Grading and Drainage Plans and Landscape Plan. Existing and proposed contours or utility lines shall not be shown on Site Plan. Physical features that will remain after the proposed construction has been completed shall be shown. This plan, or the Location Plan, will also show any free zones, construction limits, etc. Whenever the Site Plan occupies more than one sheet of drawings, a Key Plan shall be included. Additional plans showing specific areas of the site in smaller scales can be included if more detail is necessary.

2.2.1.5 Site Details

The Contractor shall provide details for all site furnishings, patios, privacy fence, accessories, handicap accessible ramps, signage, and any other site structure or item requiring a detail for clarity and construction accuracy. **(AM#2)** **Use the SWD-AEIM standard details for civil design work such as sidewalks, curb and gutters, pavement, and drainage structures.**

2.2.1.6 Landscape Plan

A detailed Landscape Plan showing trees, shrubs, ground covers, seeded and sodded areas, shall be prepared by the Contractor. The Landscape Plan shall be prepared by a fully qualified, experienced professional Landscape Architect. The Contractor shall specify types of plant materials that are locally grown, commercially available and acclimated to the project environment. The Landscape Plan shall include a plant materials schedule or listing. This schedule shall include botanical names, common names, key, size and the method of transplanting. The Landscape Plan shall also show all un-surfaces ground areas disturbed by construction within the project limits with these areas shown to be seeded or sodded as required.

2.2.1.7 Landscape Details

The Contractor shall verify the methods of planting to meet the project site/installation requirements and provide the necessary Landscape Details to perform the contract design work. Details shall reflect local practices and conditions for installation.

2.2.1.8 Grading and Drainage Plan

A final grading and drainage plan shall be provided at the same scale as the site plan. New and existing grading contours shall be indicated at 250mm (1-foot) contour intervals. Indicate the finished floor elevation of new houses and structures. Plans shall show the layout of the new and

existing storm drainage and roof drainage systems. Provide spot elevations at building corners, changes in grade, etc. Storm drainage lines and structures shall be labeled. The rim elevation of all manholes, curb inlets, and area inlets shall be indicated. Provide location and description of benchmarks and indicate vertical and horizontal datums.

2.2.1.9 Storm Drain and Culvert Profiles

Provide profiles of any new storm drains and culverts showing new and existing grades, new and existing utilities, pavement sections in detail, pipe diameters and lengths, pipe slopes, invert elevations, etc. Class and gauge of all storm drain and culvert pipes shall be provided.

2.2.1.10 Drainage Structure Details

Provide typical details of all storm drainage structures. Unless otherwise directed, use the details in the Southwestern Division's SWD-AEIM Manual. The use of alternate details shall be approved prior to submitting the final design documents. Show dimensions on either the storm drain schedule, the storm drain profiles, or on the storm drain structure detail drawings.

2.2.1.11 Storm Water Pollution Prevention Plan (SWPPP) Site Map

Provide a site map indicating drainage patterns and approximate slopes anticipated after major grading activities, areas of soil disturbance, areas which will not be disturbed, locations of major structural and nonstructural erosion controls identified in the SWPPP, locations where stabilization practices are expected to occur, locations of off-site material, waste, borrow or equipment storage areas, surface waters (including wetlands), and locations where storm water discharges to a surface water.

2.2.1.12 Erosion Control Details

Provide details of Best Management Practices used to control erosion.

2.2.1.13 Typical Pavement Sections and Details

Provide typical driveway, sidewalk, patio, pavement overlay, curb and gutter, curb ramps, and road repair sections and details.

2.2.1.14 Typical Driveway Pavement Joint Layout Plans

Provide typical pavement joint layout plans for each type of housing unit provided. Each type of joint shall be shown with a different symbol and a joint legend provided. Under no circumstances shall pavement joint layout plans be combined with any other plans.

2.2.1.15 Sanitary Sewer and Water Plans

Sanitary sewer and water plans shall show locations of new and existing mains and service lines, elevation of sewer pipe, valves, connections. thrust blocks, manholes, etc. Scale to match site plans.

2.2.1.16 Natural Gas Plans

Scale to match site plans for natural gas plans. Natural gas distribution system plans shall include, but not limited to, the following:

--Locations of existing mains and service lines, including those to be removed.
--Locations of new gas service mains and service lines, including points of connection to existing piping.
--Trench installation Details for both the main lines and the service lines.
--Valve Box Details.
--Gas Service Regulator Assembly Detail.
--Cathodic Protection Details.

2.2.1.17 Electrical Distribution Plans (Scale to match site plan)

Electrical distribution plan shall show site lighting (street and walkway), primary cable routing (new and existing), pad-mounted transformers and switches, and secondary service laterals. Scale to match site plans.

Show the following:

-- Site lighting (street and walkway)
-- Primary cable routing (new and existing)
-- Pad-mounted transformers & switches
-- Secondary service laterals

2.2.1.18 On-Site One Line Diagram

2.2.1.19 On-Site Distribution Transformer Schedule Schedule (with the following headings)

--Transformer Designation
--Transformer Size (KVA)
--Building(s) Served
--Primary Phase(s) and Circuit to which connected.

2.2.1.20 On-Site Details(Site Lighting, Trenching, Etc.)

2.2.1.21 Site/Infrastructure Specifications

Construction specifications shall be complete and fully coordinated with the drawings, **(AM#2) and shall include sections covering demolition; clearing and grubbing; earthwork; excavation, trenching, and backfilling for utilities; water distribution systems; sanitary sewers; storm drainage system; gas distribution system; building excavation, filling and backfilling; subbase courses; aggregate base courses; hot-mix asphalt for roads; concrete pavement; concrete sidewalks; concrete curbs and gutters; and fencing**. All specification indexes shall be completely edited to reflect the paragraphs retained in the body of the specification. All references that have not been used in the body of the specification shall be edited from the specification.

Required Site Infrastructure Specifications (100% Complete):

2.2.2 HOUSING UNITS

Submit for each housing type.

a. Floor Plans: (Scale 1:50 (1/4" = 1'-0"))

For each housing type, show the following:

-- Overall dimensions
-- Room description with dimensions and areas
-- Furniture layouts
-- Vanities
-- Appliances (including occupant-owned washer, dryer, and micro-wave oven; and contractor-furnished refrigerator, stove, and dishwasher)
-- Plumbing fixtures
-- Kitchen layout
-- Door swings
-- Garage locations
-- Patio, Walks and Private fencing
-- Exterior/Interior bulk storage
-- Service (trash) area
-- Furnace, AC units, and hot water heater location
-- Vents/registers/diffusers
-- Calculated gross and net floor areas
-- Electrical switches, outlets, telephone jacks, CATV jacks
-- Electric light fixture locations and schedule
-- Equipment Layout
-- Smoke/carbon monoxide detectors

b. Exterior Elevations: (Scale 1:50 or 1:100 (1/4" or 1/8" = 1'- 0"))

For each housing type, show all sides of a building complete with notes indicating the exterior finish materials shall be shown.

c. Interior Elevations: (Scale 1:50 (1/4" = 1'- 0"))

Show the following:

-- Kitchen
-- Bathrooms

d) Building Cross Sections for Each Type of Building: (Scale 1:50 (1/4" = 1'- 0"))

For each housing type, show the following:

--Structural system
--Building materials
--Finishes
--Vertical dimensions

e. Typical Wall Section: (Scale 1:20 (3/4" = 1'- 0"))

For each housing type, show the following:

--Typical wall
--Foundation
--Floor and roof section
--Materials
--Cavity wall
--Party wall w/STC rating
--Fire rated construction with UL or Gypsum Association File No.
--Thermal Insulation

f. Finish Schedule

Show finish schedule of all rooms.

g. Fire and Sound Rated Assemblies

Show the construction of fire and sound rated assemblies in detail and note on the drawings the tested design upon which the construction is based. Note any modification to materials or method of construction. Detail all penetrations of rated partitions.

h. Detail References

All details shall be referenced to floor plans, elevations or sections.

i. Kitchen Cabinet Elevations

Kitchen cabinet elevations shall note cabinet sizes.

j. Foundation and Floor Slab Plans (Scale: 1:18 (1" = 1'-0"))

For Each Housing Type show:
--Dimensions and materials of foundation system (If not shown on any other typical drawing)

k. Structural Floor and Roof Framing Plans (SCALE: 1:18 (1" = 1'-0"))

For Each Housing Type show:
--Structural framing members and spacing dimensions
--Details of any main structural framing members or connections such as beams, headers, etc.

l. Architectural Rendering

Contractor shall provide ground level perspective artist's renderings of typical family housing units completed with walks, parking, and landscaping. Renderings shall be no smaller than 356mm by 457mm (14 inches by 18 inches) or larger than 711mm by 914mm (28 inches by 36 inches), multi-colored, and shall be suitably titled, matted, and framed.

m. Color Boards

Color Boards shall be submitted showing color and pattern of materials prepared for interior and exterior finish materials, including floor, wall and ceiling finishes, roofing, siding, and trim shall be submitted to Contracting Officer on 216mm by 279mm (8-1/2 inches by 11 inches) sample boards/binder format.

n. Consumer Information for Handicapped Requirements

The Contractor shall furnish a report including drawings in accordance with the Uniform Federal Accessibility Standards, paragraph 4.34.4 "Consumer Information" for the modified and adaptable features of each applicable unit type of family housing.

2.2.3 MECHANICAL AND PLUMBING REQUIREMENTS

Required Plans, Diagrams, Schedules, and Details on Unit Mechanical Drawings (100% Design Stages):

a. Mechanical Floor Plan: (Scale: 1:50 (1/4" = 1'-0"))

The floor plans shall show all principle architectural features of the building which will affect the mechanical design. The floor plan shall also show the following:

--Room designations
--Mechanical legend and applicable notes
--Location of all ductwork or piping (double line ductwork required)
--Location and capacity of all terminal units (i.e., registers, diffusers, grilles, hydronic baseboards)
--Exhaust fan and range hood location
--Size of all ductwork and piping shown
--Thermostat location
--Location of heating equipment (i.e., furnace)
--Location of air conditioning equipment
--Return air paths (i.e., undercut doors, transfer grilles)
--Flue piping - size and location
--Piping diagram for forced hot water system (if used)
--Fuel supply and return piping

b. Equipment Schedule Sheet:

Complete equipment schedules shall be provided. Schedule shall also include:

--Capacity
--Electrical characteristics
--Efficiency (if applicable)
--Manufacturer's name
--Any optional features to be provided
--Physical size

c. Details

Construction details, sections, elevations, etc., shall be provided where required for clarification of methods and materials of Design. All roof and exterior wall penetrations shall be detailed on the drawings. (Details shown on the architectural sheets need to be repeated here.)

d. Plumbing Floor Plan: (Scale: 1:50 (1/4" = 1'-0"))

The floor plan shall show all principal architectural features of the building which will affect the plumbing design. The floor plan shall also show the following:

--Room designations
--Fixture Schedule
--Location of utility entrances
--Waste, vent, and hot and cold water pipe locations and sizes
--Fixture designations
--Location of hot water heater

--Plumbing riser diagram

e. Plumbing Plans

Separate plumbing plans will not be required if sufficient information can be shown on the mechanical plans to meet the requirements shown above.

2.2.4 ELECTRICAL REQUIREMENTS

a. Electrical Floor Plan: (Scale: 1:50 (1/4" = 1'-0"))

The floor plans shall show all principle architectural features of the building which will affect the electrical design. The floor plan shall also show the following:

--Room designations
--Electrical legend and applicable notes
--All lighting fixtures, properly identified
--Location of all smoke detectors
--Location of telephone outlets
--Location of television outlets
--All switches for control of lighting
--All receptacles
--The location and designation of all panelboards. Plans should clearly indicate type of mounting required (flush or surface) and be reflected accordingly in specifications.
--Service entrance (conduit and main disconnect)
--Location, designation and rating of all motors and/or equipment which requires electrical service. Show method of termination and/or connection to motors and/or equipment.
--Show all necessary junction boxes, disconnects, controllers (approximate only), conduit stubs, and receptacles required to serve the motor and/or equipment.

b. Building Riser Diagram (from pad-mounted transformer to unit load center panelboard)

Indicate the types and sizes of all electrical equipment and wiring. Include grounding and metering requirements.

c. Unit Load Center Panelboard Schedule(s)

Schedule shall indicate the following information:

--Panelboard Characteristics (Panel Designation, Voltage, Phase, Wires, Main Breaker Rating and Mounting)
--Branch Circuit Designations.
--Load Designations
--Circuit Breaker Characteristics (Number of Poles, Trip Rating, AIC Rating)
--Branch Circuit Connected Loads (AMPS).
--Any Special Features

d. Lighting Fixture Schedule

Schedule shall indicate the following information:

--Fixture Designation

--General Fixture Description
--Number and Type of Lamp(s)
--Type of Mounting
--Any Special Features

e. Details

Construction details, sections, elevations, etc., shall be provided where required for clarification of methods and materials of design.

2.2.5 SUSTAINABLE PROJECT RATING TOOL (SPiRiT)

(AM#2) In accordance the substantiation requirements, update the Contractor's Sustainable Project Rating Tool (SPiRiT) sheets, indicating the status of design related to the listed elements and the achievement of these elements.

2.2.6 HOUSING UNIT SPECIFICATIONS

2.2.6.1 Site Infrastructure Specifications

a. Asbestos Abatement

The Contractor shall review attached asbestos surveys and edit specification Section 13280 ASBESTOS ABATEMENT accordingly. The specification shall identify all asbestos-containing materials to be removed from the units scheduled for demolition and describe all control and removal methods for each type of material. Quantities of each type of material shall be identified in the specification. Questions regarding the asbestos surveys shall be submitted to Contracting Officer. If the Contractor proposes to allow any Category I nonfriable asbestos-containing materials to remain in the units during demolition, such materials shall be identified in the specifications. All specification requirements shall comply with applicable federal and state regulations.

b. Lead-Based Paint

The Contractor shall review attached lead-based paint survey. Any lead-based painted architectural components proposed for removal prior to demolition shall be identified in the specifications and the removal procedures and associated health and safety protocols shall be described. Lead-based painted surfaces that will remain in the units for demolition shall be identified. The specifications shall also discuss proposed disposal of lead-based painted components or surfaces and describe any disposal testing (toxicity characteristic leaching procedure or tclp).

2.3 DESIGN ANALYSIS & DESIGN CALCULATIONS

Design analysis and design calculations shall include complete site and housing unit descriptions and design calculations for storm drainage improvements, utility distribution systems, structural elements, electrical and mechanical systems, and roadway pavement and shoulder design.

2.3.1 STORM DRAINAGE SYSTEM CALCULATIONS

Storm Drainage System Calculations shall include the following:

a) Drainage area map showing boundaries of each drainage area and respective drain inlet or culvert.

b) Storm run-off calculations for each drainage area.

c) Tabulation of capacities of new storm drains including: diameter and slope of storm drain pipes, design storm discharge and velocity for each storm drain pipe, maximum discharge capacity of each storm drain pipe, headwater depth of each culvert during design storm discharge.

d) Hydraulic capacity calculations for each new curb and area inlet.

2.3.2 MECHANICAL DESIGN ANALYSIS

Water Supply Calculations: Submit calculations at Final (100 percent) design stages to determine correct main water supply to each unit and/or building.

2.3.3 ELECTRICAL DESIGN ANALYSIS

All design and calculations for the electrical systems shall be performed by a licensed professional engineer with experience in family housing, and shall be stamped as such. The design shall be a separate bound assembly, in one or more volumes, of all the functional and engineering criteria, design information, and calculations applicable to the project design. The analysis shall be organized in a format appropriate for review, approval, and record purposes. The design calculations shall be presented in a clear and legible form, with all methods and references identified, and all assumptions and conclusions explained.

a. Load Calculations

(1) A separate demand load calculation shall be provided for each type of individual living-unit (per NEC Art. 220). Include catalog cuts of the electrical data for the HVAC equipment that was selected by the mechanical designer.

(2) A separate demand load calculation shall be provided for each type of multifamily dwelling. (Per NEC Art. 220)

(3) Calculate the demand load for each pad-mounted distribution transformer by adding all the demand loads (minus the HVAC load), for each type of living unit connected to the transformer, then multiply by the appropriate demand factor found in the following table. Then, the HVAC load and any site lighting loads are added to this figure to arrive at the transformer demand load. (Note that the demand factors in the table shall not be applied to the HVAC loads and the Site Lighting loads, which are included at 100% demand.

DEMAND FACTOR TABLE

Number of Quarters	Demand Factor Percent	Number of Quarters	Demand Factor Percent	Number of Quarters	Demand Factor Percent
1	80.0	19	18.6	37	13.2
2	60.0	20	17.5	38	13.0
3	50.0	21	17.1	39	12.8

Number of Quarters	Demand Factor Percent	Number of Quarters	Demand Factor Percent	Number of Quarters	Demand Factor Percent
4	45.0	22	16.6	40	12.6
5	40.0	23	16.1	41	12.4
6	35.0	24	15.8	42	12.2
7	32.0	25	15.6	43	12.0
8	29.0	26	15.4	44	11.8
9	27.0	27	15.2	45	13.6
10	25.0	28	15.0	46	11.4
11	24.0	29	14.8	47	11.2
12	23.0	30	14.6	48	11.0
13	22.0	31	14.4	49	10.8
14	21.0	32	14.2	50	10.6
15	20.0	33	14.0	51	10.4
16	19.4	34	13.8	52	10.4
17	18.7	35	13.6	53	10.1
18	18.3	36	13.4	54	10.0

(4) Calculate the demand load for each phase of each circuit of the primary distribution system. The loads shall be computed using the same method as outlined for the pad-mounted transformers in the previous paragraph. (Note that for 54 or more living-units, the demand factor shall be 10 percent).

(5) In addition to the complete load calculations required hereinbefore, provide load summary tables which group and identify each type of demand load calculated. (Individual living-units, multifamily dwellings, pad-mounted distribution transformers, and primary phases.)

b) Voltage Drop (VD) Calculations

(1) Select conductor sizes of primary feeders and calculate maximum footage for each phase of each primary circuit, using a maximum allowable VD for each circuit.

(2) Select conductor sizes of site lighting circuits and calculate the VD for each circuit. (Maximum allowable VD = 3 percent).

(3) Select service lateral conductor sizes for each multifamily swelling and calculate the maximum length (in feet) of each different type of service lateral using a maximum allowable VD of 3 percent.

(4) Select unit feeder conductor sizes for each individual living-unit and calculate the VD for the worst case branch circuit. The combined voltage drop for the service laterals, unit feeders, and branch circuit shall not exceed 5 percent.

(5) Short Circuit Calculations: Calculate the available fault current at the main breaker of the individual living-unit load center panel. A coordination study shall be provided for all fuse selections.

2.3.4 **(AM#2) Meeting Minutes and Annotated Comments**

(AM#2) Include all meeting minutes and annotated comments with the final Design Analysis.

2.3.5 **(AM#2) Deleted**

2.3.6 **(AM#2) Deleted**

2.4 **(AM#2) Submittal Register**

Update the Submittal Register submitted at the Design Development stage , listing submittals for all specification sections that require submittals. Submit four hard copies and on a CD-ROM disk the updated submittal register files and program for this design submittal.

PART 3 EXECUTION

3.1 DRAWINGS

Prepare, organize, and present drawings in the format specified herein. Provide drawings complete, accurate and explicit enough to show compliance with the Contract requirements and to permit construction. Drawings illustrating systems proposed to meet the requirements of the Contract performance specifications shall reflect proper detailing for each such system to assure appropriate use, proper fit, compatibility of components and coordination with the design analysis and specifications required by this section. Coordinate drawings to ensure there are no conflicts between design disciplines and between drawings and specifications. For specific drawing requirements, see paragraphs: DESIGN DEVELOPMENT (60 PERCENT PRELIMINARY DESIGN) REQUIREMENTS and CONSTRUCTION DOCUMENTS (100 PERCENT DESIGN) REQUIREMENTS.

3.1.1 CONSTRUCTION DRAWINGS

3.1.1.1 CADD Drawings

The Contractor shall ensure that all delivered CADD digital files and data (e.g., base files, reference files, cell/block libraries) are compatible with the Government's target CADD system and operating system and shall be furnished to the Government in uncompressed AutoCAD drawing file format (*.DWG) in the version and release currently being used by Dyess AFB (Autodesk Map 5 and AutoCAD 2000). Autodesk Map 5 format is specifically required for certain geo-referenced Dyess AFB site plan (design) drawings to support Dyess AFB's GIS system, as discussed below. DOS MSBACKUP or any other means of file compression is NOT acceptable. The term "compatible" means that data is in native digital format i.e. .dgn, and can be accessed directly by the target CADD system without translation, preprocessing, or postprocessing of the digital data files. It is the responsibility of the Contractor to ensure this level of compatibility.

3.1.1.2 CADD Standards

a. CADD drawings shall be prepared in accordance with the applicable general and discipline-specific provisions for drawing formats, level/layer assignments, line colors, line weights, and line types of the "Tri-Service A/E/C Standards" and the "SWD Architectural and Engineering Instruction Manual (AEIM), Chapter VIII, "Drafting Standards."

b. All symbology or blocks developed by either the Contractor or Government shall be interchangeable and adhere to sound architectural

graphics standards as per the American Institute of Architects. This does not include such symbology or blocks developed by software vendors which would result in copyright violations.

c. All title blocks and drawing border shall be drawn full scale (1"=1") in AutoCAD Paperspace. All drawings, including details, shall be drawn full scale (1"=1") and appropriately scaled into AutoCAD Paperspace Viewports.

d. CADD drawings/lettering are required. No sticky-back or other modifications other than signatures and professional seals may be made to the plotted drawings.

e. Drawing Files shall be named according to Building/Facility No. ___ Sheet No. (I.E. 5646-01.DWG).

f. As-Built Drawings: The Contractor shall also comply with the following regarding Contractor-furnished as-built drawings to support Dyess AFB's GIS system:

g. The CADD standards for design of this project, including seed/prototype files containing the Government's preset standard settings and electronic reference files containing the Government's standard border/title block sheets, are located at the following Web site:

http://tsc.wes.army.mil/products/standards/aec/aecstdweb.asp.

The Contractor shall submit a written request for approval of any deviations from the Government's established CADD standards. No deviations will be permitted unless prior written approval of such deviation has been received from the Government.

3.1.1.3 Dyess AFB GIS System

To support Dyess AFB's GIS system, all site plan (design) drawings (Site demolition plan, site features plan, grading plan, utility plan, communication site plan, landscaping plan, irrigation plan, electrical site plan, etc) shall be produced by modifying a single (one) GF, geo-referenced (GR), Autodesk Map 5, Dyess AFB drawing file titled "Base Map.dwg". To produce each required individual project site plan sheet, the Contractor shall insert the trimmed "Base Map.dwg" file into the project drawing viewport via X-reference. Also, the appropriate X-referenced GF utilities files and other GF plan files listed shall be X-referenced and binded to the "Base Map.dwg". For all such geo-referenced design drawings, the Contractor shall indicate on the drawing border which layers are turned on and also indicate just below the sheet title, "This is a Geo-Referenced Drawing."

a. Reduce File Size: The "Base Map.dwg" shall be trimmed to include only the project site area; and "saved as", Base Map (Organization/date).dwg. This will reduce the project drawing file size.

b. Maintain Geo-referencing: The Contractor shall maintain geo-referencing orientation, line types, layer colors, layer designations, and symbols as provided on the Government-furnished, geo-referenced drawing file.

c. New Information added by Contractor: The Government-furnished

geo-referenced drawing file is layered in compliance with Spatial Data Standards for Facilities, Infrastructure, and Environment (SDSFIE) as published by the CADD/GIS Technology Center, Vicksburg, MS. Linetypes, colors, symbology, and data tables are in compliance with this standard. Any new elements that are introduced by Designer during the design process shall also comply with these standards regarding layering, linetypes, color, symbology, and data tables.

d. Errors in Government-furnished, Geo-referenced Drawing File: The Contractor shall make corrections to the Government-furnished, geo-referenced drawing file to be used in the design drawings when discrepancies between the geo-referenced drawing file and the existing site conditions are identified during Designer's field survey to be conducted as part of the normal design effort.

e. Tiff Images: A GF, GR, "Tiles with photos loaded & scaled.dwg" file will be provided/made available to the Contractor which x-references *.tif photo images of Dyess AFB. These images can be loaded and used to digitize any desired features which are not presently shown on the "Base Map.dwg" file.

f. Contour Drawings: New drawing sheets which are intended to show changes to existing contours shall be created on a new layer in the "Base Map.dwg" file. When the project contour is created, the changed contour lines in the new layer shall appear bold-continuous and the existing contour lines shall appear dashed.

g. Design Revisions: The File Name for each new and revised project sheet shall contain in addition to the Sheet Number the company name of the originator/revisor and the date (Example: 7210 SEQ1(CSG 040102).dwg).

3.1.1.4 Size of CADD Drawings

Overall Size of CADD drawings shall be SI AI (594 mm by 841 mm (23.39 by 33.11 inches), at the trim line. Full size drawings shall be submitted for all design submittals. SI working units and the District's standard file-naming convention shall be used.

3.1.1.5 .CAL Files

In addition to copying the electronic CADD drawing files to the Submittals' CD-ROM disk, include the drawings in .cal format so that the drawings may be viewed on screen using MaxView Reader that is located on the Solicitation and Contract CD-ROM disks. Include a "sendable" compiled Project.svd index file, created with MaxView Author, so that the drawings may be viewed by double-clicking on this file. MaxView's web site is http://www.maxview.com. Keep the CADD files and the .cal files in separate folders.

3.1.1.6 Drawing Format

Title block shall include, as a minimum, project title and location, sheet title, **(AM#2) sheet number,** and sequence number. For each design submittal, each Contractor-prepared drawing shall bear the printed name and signature of the registered architect or appropriate registered engineer responsible for the work portrayed on that drawing and proposed to meet the Contract requirements. For the final submittal, each Contractor-prepared drawing shall bear the stamp or seal and signature of the registered

architect or appropriate registered engineer responsible for the work portrayed on that drawing and proposed to meet the Contract requirements.

3.1.1.7 Drawing Scales

Work shall be drawn at the scales listed below. All disciplines should use the same scale for plan sheets. Scale for all drawings and delineation will permit complete legibility. A graphic bar or checkerboard scale will be provided on each sheet near the lower left hand corner of th sheet. Unless specified elsewhere, conventional scale standards are as follows:

	METRIC (SI) (ENGLISH)
Site Plans (Buildings)	No smaller than 1:200 (No smaller than 1-inch = 30 feet)
Floor Plans (Note 1)	1:50 to 1:100 (1/4-inch to 1/8-inch = 1 foot)
Roof Plans	1:100 (1/8-inch = 1 foot)
Exterior Elevations	1:100 (1/8-inch = 1 foot)
Interior Elevations	1:50 (1/4-inch)
Cross Sections	1:50 to 1:100 (1/4-inch to 1/8-inch)
Wall Sections (Note 3)	1:20 (3/4-inch = 1 foot)
Stair Details	1:20 (3/4-inch = 1 foot)
Details (Note 2)	1:5 or 1:10 (3 inches or 1 1/2 inches = 1 foot)
Reflected Ceiling Plans	1:100 (1/8-inch = 1 foot)
Interior Toilet Elevations	1:20 (3/4-inch = 1 foot)
Wall Types	1:5 or 1:10 (3 inches or 1 1/2 inches = 1 foot)

Notes:

1. Scale of composite plans shall be as required so that the entire facility is drawn on one sheet without break lines.

2. The details shall be large enough to show all fixtures, accessories, equipment, materials, manner of construction, clearances required for proper maintenance, and complete dimensions. Toilet rooms and Equipment rooms are examples of the kind of spaces which shall be drawn as a Detail Plan. All details containing sheet metal flashing shall be 1:5 (3 inches = 1 foot).

3. May be 1:20 (3/4-inch = 1 foot) if pertinent details are shown at larger scale.

3.1.2 DRAWINGS SEQUENCE

Arrange drawings by design discipline in accordance with the SWD-AEIM, Chapter VIII, Appendix A, Plate D1, Standard Arrangement Of Drawings.

3.2 CONSTRUCTION SPECIFICATIONS

(AM#2) Except as otherwise noted, the Contractor shall use commercially available guide specifications for developing construction specifications, such as "SpecText" published by The Construction Specifications Institute (http://csi.worldweb.net/technic/master/spectextms.htm), and "MasterSpec" published by The American Institute of Architects (http://www.arcomnet.com/), or BSD SpecLink (Building Systems Design, Inc.,

Atlanta, GA, http://csi.worldweb.net/technic/master/bsdms.htm and http://www.bsdsoftlink.com/speclink/sl_frame.htm), or manufacturers' product specifications utilizing CSI's Manu-Spec format. These specifications shall conform to the applicable criteria requirements indicated in the solicitation (Section 01000, Parts 1-15). Format shall be the Construction Specification Institute (CSI) 16-Division, 3-Part Section format. Sections shall be numbered in accordance with CSI MasterFormat. No two sections shall have the same section number.The specifications shall clearly identify, where appropriate, the specific products chosen to meet the requirements of the specifications (manufacturers' brand names and model numbers or similar product information). The Contractor shall be responsible for coordinating references, along with the technical requirements, to specific specification sections (number and title) within the project specifications. Section references (title and number) shall be revised to reflect the titles and numbers of specification sections used. Specific required modifications to Commercial Guide Specifications are:

a. Indicate the guide specification series (e.g. CSI SpecText, MasterSpec, SpecLink) in either the header or footer of each section.

b. Change references to the "Architect" or "Engineer" to "Contracting Officer" and "Owner" to "Government".

c. Change references to "Section 01300" or "Section 01300 SUBMITTALS" to "Section 01330 CONSTUCTION SUBMITTAL PROCEDURES."

d. (AM#2) Mandatory guides and sections listed in the Project Table of Contents are UFGS and UFSWF guide specifications. Microsoft Word versions of these guides are located on the Solicitation and Contract CD disks.

3.2.1 DIVISION 1 SPECIFICATION SECTIONS

Include Division 1 specifications sections contained in this Contract as part of the project specifications without change.

3.2.2 FORMAT FOR CONSTRUCTION SPECIFICATIONS

Submit the construction specifications, including cover page and project table of contents, printed using a word processor.Use the Corps of Engineers Specsintact with SGML, Version 3.0 or higher, software to edit the Corps of Engineers' mandatory sections. Use good quality white paper. The corrected final (100 percent) specifications with review comments incorporated shall be cleaned up (without marked-up edits) and submitted in both hard copy and on magnetic media (Microsoft Windows compatible CD-ROM disk(s)and compatible with the Microsoft Word 2000 format. Cover page, specifications, and attachments shall be prepared in a Microsoft Word (compatible with Microsoft Word 97) format. Carbon copies are not acceptable..

The Cover page shall be similar to the Contract Cover page and shall include:

a. Project title, Project Number, activity and location

b. Construction contract number

c. Construction Contractor's name and address

d. Design firm's name and address

e. Names of design team members (Designers of record) responsible for each Contractor prepared technical discipline of the project specification

f. Name and signature of a Principal of the design firm

The Table of Contents shall list the 16 Divisions contained in CSI format and the specification section numbers and titles contained in the project specification.

The Corps of Engineers Specsintact and Wordspec software can be downloaded from the Internet at the following address:

http://kscdl2.ksc.nasa.gov/specsintact/.

The Corps of Engineers UFGS guide specifications (SI SGML format), the Lighting Fixture Standard Drawing 40-06-04 Details and Design Criteria (e.g. Army Technical Manuals (TM's), Engineering Manuals, Engineering Technical Letters, Engineer Circulars, Engineer Pamphlets, Design Guides, and Military Handbooks) can be downloaded from the Internet at the following address:

http://www.hnd.usace.army.mil, then click on Techinfo then Guide Specifications, "Engineer Publications", or "Support Documents"

The guides can only be downloaded in Winzip *.zip files. These are downloadable executable files.

Specsintact software, the UFGS guide specifications, and design criteria manuals can also be obtained from the current version of the Construction Criteria Base CD, issued by the National Institute of Building Sciences, telephone number 202/289-7800, fax number 202-289-1092, internet address is:

http://www.nibs.org.

Fort Worth District guide specifications and the District supplements to the UFGS guide specifications are located on the Internet at the following address:

(AM#2) http://www.swf.usace.army.mil/eandc/ec-a/

3.3 CONSTRUCTION SUBMITTALS

All construction submittals shall be in accordance with Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES.

Construction submittal types and products, including the submittal description numbers and data package numbers, shall be included in the specification sections, where required. When appropriate, use specific product terms instead of the generic product terms contained in the specifications sections (e.g., asphalt shingles, built-up roofing, EPDM single ply, etc. vs roof covering; concrete masonry units, brick, metal siding, etc. vs exterior skin; mineral fiber board, block, batt or blanket, polystyrene, polyurethane, polyisocyanurate board vs insulation).

3.3.1 SUBMITTAL REGISTER (FORM)

Prepare and maintain a Submittals Register in accordance with Section 01330

CONSTRUCTION SUBMITTAL PROCEDURES. An electronic version of the ENG Form 4288 is located on the Solicitation and Contract Award CD-ROM disks in folder "Subreg." This version is the Specsintact DOS Submittal Register program and includes a Readme.txt file. Copy the files to the computer's C:\ drive, remove the read-only attributes, and then double-click on either file "subreg.exe" or on "submit.bat." This is **not** a Windows-based program so the mouse **does not** work. Editing instructions are on-screen, such as press the "F5 (add)" and then the "E" keys to create new empty submittals, the "PgDn" key to complete editing, and the "A" key to accept. For each submittal, fill in the Section Number, Activity Number if applicable, Paragraph Number, Description, Type of Submittal (e.g. SD-01 through SD-11(See Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES)), Classification (e.g. G or FIO), and the Contractor's proposed submittal date. Fill in columns "a" through "o" on the ENG Form 4288 and submit a copy of the "Subreg" folder with the updated files and a hard copy of the register as required for the various construction submittals. Unless Section 01330 CONSTRUCTION SUBMITTAL PROCEDURES allows a submittal to be Government approved ("G"), all submittals shall be "FIO" for Information Only (Contractor Approved) items. A blank MS Excel version of the Form 4288 Submittal Register is also included in the "Subreg" folder and may be used if allowed by the Contracting Officer.

3.4 DESIGN ANALYSES

Prepare design analyses (basis of design and calculations) for each applicable design discipline. The design analyses shall be a presentation of facts to demonstrate that the concept of the project is fully understood and that the design is based on sound engineering. The design analysis for each discipline shall include:

a. A basis of design consisting of:

(1) An introductory description of the project concept which addresses the salient points of the design;

(2) An orderly and comprehensive documentation of criteria, rationale, assumptions and reasoning for system selection.

b. Calculations required to support the design. Complete site and housing unit design calculations for utility distributions systems, structural elements and electrical and mechanical systems. Include computations for sizing equipment, air duct design, and U-factors for ceilings, roofs and exterior walls and floors. Also include final passive energy strategy performance calculations for each housing unit type. Contractor shall employ commercially available energy analysis techniques to determine the energy performance of all passive systems and features. Use of hourly energy load computer simulation (e.g., TRNSYS, DOE 2.1 Blast, etc.) is required. Performance calculations shall also determine the peak cooling load of all passive solar unit types. These calculations can be used to size the unit's mechanical systems.

c. Equipment Schedule. Based on the results of calculations, provide a complete list of the materials and equipment proposed for heating and plumbing, with the manufacturer's published cataloged product installation specifications and roughing-in data. The heating equipment data shall include the manufacturer's wiring diagrams, installation specifications, ARI certification, and the standard warranty for the

equipment. In addition, provide the manufacturer's published cataloged capacities for supply diffusers as evidence that the arrangement of supply air outlets in each room will provide the throw and spread characteristics required to cover completely all exterior wall surfaces with the blanket of warm air at the proper design velocities.

d. Project Engineering Considerations and Instructions (ECI) for Final Design Analysis.

The Contractor shall not make reference to the RFP solicitation to avoid stating the requirements for the basis for design.

3.4.1 ENGINEERING CONSIDERATIONS AND INSTRUCTIONS (ECI) FOR FIELD PERSONNEL

3.4.1.1 Separate Appendix

Under a separate appendix in the Final Design Analysis, the Design-Build Contractor shall include the following items:

a. Features critical to the quality of the final construction product requiring special attention.

b. Submittals requiring special attention during construction.

c. Special user requirements or instructions.

d. Assumed field conditions, pertinent significant aspects, or critical phases of the project used as a basis of project design.

3.4.1.2 Format

Format for ECI's shall include the following information:

"ENGINEERING CONSIDERATIONS AND INSTRUCTIONS

Project Name:_____

Location: _____

Designer Name:_____ Phone:_____

Discipline:_____

Design-Build designers have prepared the following engineering considerations and instructions (ECI). These ECI's should be followed during the construction of the above project. If you have any questions, contact the appropriate Design-Build designer."

3.4.1.3 Distribution of ECI's

In addition to including ECI's in a separate appendix of the final design analysis and after acceptance of the 100 percent corrected design and prior to the start of construction, the design-build Contractor shall e-mail a copy of the ECI's to the appropriate U.S. Army Corps of Engineer's Field representative for his consideration with a copy also sent to the appropriate individual in following office(s): CENWO-CD-QR and CENWO-PM-M.

The Government will provide the names and e-mail addresses to the design-build Contractor at either the pre-design or pre-construction conference.

3.4.2 REQUESTS FOR INFORMATION, MEETING MINUTES AND COMMENTS

Copies of Requests for Information (RFI) made by the Contractor to the Government shall be included as an appendix to the design analysis. An index of each RFI, which documents the RFI number, the date RFI given to Government, the date the RFI is answered and the Action Response provided by the Government.

A copy of all meeting minutes and design review comments (if any) with action responses shall be included as an appendix to the design analysis.

Appendices for RFI's and Meeting Minutes and design review comments shall have page numbering that follows the same format as for Calculations listed above.

3.5 DESIGN CERTIFICATION

The Contractor shall provide certification signed by an officer of the Contractor's company attesting that the drawings, specifications and design analyses prepared for the construction of the facility meet the requirements of the Contract. The certification shall accompany the submission of the design documents along with names and disciplines for the designers of record. This design certification shall include a list of deviations (variations) from the solicitation or accepted final design. Prepare the design certification and transmittal letter in the format shown on Attachment A included at the end of this section.

3.6 COMMON DESIGN DEFICIENCIES

The work involved in making corrections due to common deficiencies becomes lost effort and time for both the designer and the reviewer. Carefully compare the design and contract documents with all requirements at several points in the design process to avoid unnecessary changes at a later date. Some of the requirements which are most often overlooked include:

a. Requirements of the COE 2, Southwestern Division's ARCHITECTURAL AND ENGINEERING INSTRUCTIONS MANUAL (SWD-AEIM) have been repeatedly overlooked in the past.

b. Failure to incorporate the Fort Worth District's supplemental local requirements to the Corps of Engineers' UFGS guide specifications.

c. Not using correct abbreviations or terminology on the drawings. Abbreviations must match what is used on the standard abbreviation sheet and terminology must match what is used in the standard technical guide specifications.

d. Not using the correct scales, north arrow designation, section cut system, or incomplete dimensioning on the drawings.

e. Not providing sufficient space for door operation hardware at doors which swing into a wall running perpendicular to the opening. 100 mm minimum is required between edge of door frame and perpendicular walls.

f. Not providing correct and complete Design Analysis information written in the present tense. The Design Analysis will be written following the format indicated herein. A separate Fire Protection section in the Design Analysis with input from all disciplines is one area which is often overlooked and shall be included.

g. Not correctly presenting or coordinating (to avoid interference) features of Fire Protection, Noise Control, and Physical Security.

h. Not correctly referencing and cross referencing building sections, wall sections, details, etc.

i. Failure to read and use technical notes in editing the Guide Specifications.

j. Failure to coordinate all disciplines prior to submittal of projects for review.

k. Improper use of fire-retardant wood. Fire-retardant wood is combustible; its use in buildings that are of noncombustible construction is extremely limited (see ICBO Bldg Code for the minor allowable uses). Because of the potential for severe degradation, fire retardant plywood shall not be used in a roof or roofing system, or in structural applications.

l. Not listing the ANSI/BHMA numbers in addition to trade names in door hardware specifications and failure to correctly specify hardware finishes.

m. Control joints in CMU walls and brick expansion joints in face brick are not shown on both architectural plans, elevations and structural plans, or are inconsistent. Note also control joint locating and coordination for floor tile per Tile Council of America recommendations.

n. Failure to delete all publications which do not apply to the particular project.

o. North is not oriented the same direction on all sheets (civil, site, arch).

Attachment A

[Contractor's Letterhead]

[Date: _____]
[Contract No. _____]

[Reviewing Component Address]

Subj: DESIGN CERTIFICATION AND TRANSMITTAL FOR
[Project Title _____]
[Project Location _____]
[Contract No. _____]

Gentlemen

Enclosed are the following documents, which I hereby certify are in compliance with the RFP requirements of the subject construction contract and can be used to commence construction subject to Government approval:

1. Design Drawings

2. Project Specification

3. Design Analysis

a. Civil
b. Water Supply and Wastewater Collection
c. Architectural
d. Interior Design
e. Structural
f. Mechanical
g. Fire Protection
h. Electrical
i. Environmental Protection, Compliance and Permits
j. Health and Safety
k. Sustainable Design

4. Submittals Register

[Typed Name and Signature of an
Officer of the Contractor's Company]

5. All other Design Submittals

6. Deviations

Copy to:
[As standard with the Contractor]

-- End of Section --